Passive Fire Protection, Fire Stopping and White Wall (G&A Fire Protection)

Contents

G&A Fire Protection
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JOB NUMBER: 80943

SITE ADDRESS:

Calder Park, Peel Avenue

Wakefield

West Yorkshire

WF2 7UA

OUR ADDRESS:

G&A Fire Protection Ltd

Unit J2 Welland Industrial Estate

Valley Way

Market Harborough

Leicestershire

LE16 7PS

Tel : 01858 432 222

E-Mail : info@ga-group.com

Web : www.ga-group.com

Client: Tungsten
Main Contractor: Winvic
Architect: HTC Architects
Contract Name: Tungsten - Calder Park
Project Location: Wakefield
G&A Surveyor: Mike Hill

Scope of Works

Ref	Description of Works	QTY	Unit
	Fire Protection		
A	Water-based Intumescent Paint to beams and columns of the main office to provide 60mins Fire Protection.	1	*item*
B	Water-based Intumescent Paint to beams and columns of the welfare office to provide 60mins Fire Protection.	1	*item*
	Whitewall - Propietary metal framed system to form walls		
A	120mm thick Composite Panels, n.e height of 3.8m/13.8m, 45m/66.3m wide, to form whitewall to Main Office. Installed in accordance with manufacturer-approved details; inclusive of all unloading and distribution U.N.O. Walls from First Floor measured from TOS. Panel Test Standard: LPS1208 Panel Fire Rating: 60min Orientation: Horizontal (Vertical to U/S FF) Max Unsupported Span: 7.5m U-value: 0.31W/m2K Weighted Sound Reduction: 31Rw(db) Finish: Flat Profile; RAL 9010 (Both Sides)	1086	m^2
A	120mm thick Composite Panels, n.e height of 9.4m, 13.4m wide, to form whitewall to Welfare Office. Installed in accordance with manufacturer-approved details; inclusive of all unloading and distribution U.N.O. Panel Test Standard: LPS1208 Panel Fire Rating: 60min Orientation: Horizontal (Vertical to U/S FF)	126	m^2

Client: Tungsten
Main Contractor: Winvic
Architect: HTC Architects
Contract Name: Tungsten - Calder Park
Project Location: Wakefield
G&A Surveyor: Mike Hill

Scope of Works

Ref	Description of Works	QTY	Unit
	Max Unsupported Span: 7.5m U-value: 0.31W/m2K Weighted Sound Reduction: 31Rw(db) Finish: Flat Profile; RAL 9010 (Both Sides)		
B	Extra over for forming of openings, lined with 2mm powder-coated mitred angles, panels fixed back to secondary steelwork behind.		
	- Single Door	4	nr
	- Double Door	1	nr
C	Extra over for angles and flashings.		
	- Base Track	103	m
	- Top Cap	79.7	m
	- Top Hats (Large)	137.4	m
	- Top Hats (Small)	138.2	m
	- U/S Slab Deflection Detail	22.9	m
	- External Corners	126.3	m
D	Extra over for vertical abutments from panel end to cladding.	61.6	m
E	Extra over for horizontal head return detail from panel to cladding.	79.7	m
	Fire Stopping		
A	Horizontal cavity barrier from slab edge to close void.		
	- Width n.e 50mm; 60min integrity.	168.9	m
	- Width n.e 250mm; 60min integrity.	231.9	m

Client: Tungsten
Main Contractor: Winvic
Architect: HTC Architects
Contract Name: Tungsten - Calder Park
Project Location: Wakefield
G&A Surveyor: Mike Hill

Scope of Works			
Ref	**Description of Works**	**QTY**	**Unit**
B	Cavity barrier, sheet, to ceiling void above suspended ceilings using woven glass curtain. *Based on blank curtain - penetrations to be charged against Schedule of Rates. Allowance in provisional allowance for fire stopping penetrations below.*		
	- Drop n.e. 1.6m; 30/15 integrity/insulation.	74.24	m^2
	Fire stopping to non-structural service penetrations through fire-rated partitions	1	*item*
	PRICED PLANT Whitewall Telehandler: 20mt (Top Panels), 17mt Whitewall MEWPS: HR21		

Certificates/Warranties/Guarantees

winvic.co.uk

LPCB®

Passive Fire Protection Installation

LPS 1500: ISSUE 2
CERTIFICATE OF CONFORMITY

Certificate No. 889Plb000043

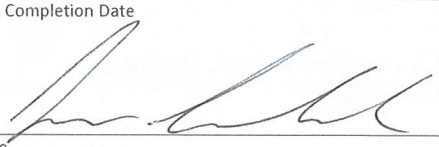
This certificate is issued by the LPS 1500 approved company named in (1) of the schedule, for the client in (2) of the schedule, for the following premises:

Calder Park
Peel Avenue
Wakefield
West Yorkshire
WF2 7UA

Schedule

G & A Fire Protection Ltd 1) Issuing Company	889Plb Company Certificate No.

We, being certified to LPS 1500 in respect of the installation of LPCB Approved passive fire protection construction elements used to provide compartmentation in buildings, do certify that the installation was carried out in accordance with LPS 1500 "Requirements for the LPCB approval and listing of companies installing construction elements used to provide compartmentation in buildings"

Winvic Construction Limited 2) Client	80943 Contract Number
Calder Park - Wakefield Contract Name	22 September 2022 Contract Completion Date
Ivor Seabrook – Contract Manager Name, Position	 Signature
G&A Fire Protection Limited For and on behalf of	22 September 2022 Issue date

Company Certificate No. 889Plb

BF1295 Rev. 0.4

LPCB®

LPS 1500: Issue 2 Certificate of Conformity

Certificate No. 889Plb000043

Schedule Continued:

Contract premises:

Calder Park
Peel Avenue
Wakefield
West Yorkshire
WF2 7UA

Calder Park - Wakefield
Contract Name

80943
Contract Number

LPS 1208 approved product manufacturer, product name, fire resistance

Scope of Works	Location
Trimotherm Power T - 120mm thick panels. Horizontally installed (vertical to undercroft areas) to provide 60 minutes fire separation to LPS1208	Installed in the main and welfare office/ Warehouse Separation Wall- as per As Built drawings

Works not completed or excluded	Location
Any works not listed above.	All other locations.

Ivor Seabrook – Contract Manager
Name, Position

Signature

G&A Fire Protection Limited
For and on behalf of

22 September 2022
Issue date

Company Certificate
No. 889Plb

LPCB®

Passive Fire Protection Installation

LPS 1531: ISSUE 1
CERTIFICATE OF CONFORMITY

Certificate No. 889Pla001289

This certificate is issued by the LPS 1531 approved company named in (1) of the schedule, for the client in (2) of the schedule, for the following premises:

Calder Park
Peel Avenue
Wakefield
West Yorkshire
WF2 7UA

Schedule

G & A Fire Protection Ltd 1) Issuing Company	889Pla Company Certificate No.

We, being certified to LPS 1531 in respect of the installation and application of passive fire protection products, do certify that the installation or application was carried out in accordance with LPS 1531 "Requirements for the LPCB approval and listing of companies installing or applying passive fire protection products".

Winvic Construction Limited 2) Client	80943 Contract Number
Calder Park - Wakefield Contract Name	Click here to enter a date. Contract Completion Date
Ivor Seabrook - Contract Manager Name, Position	 Signature
G&A Fire Protection Limited For and on behalf of	22 September 2022 Issue date

Company Certificate
No. 889Pla

LPCB®

LPS 1531: Issue 1 Certificate of Conformity

Certificate No. 889Pla001289

Schedule Continued:

Contract premises:

Calder Park
Peel Avenue
Wakefield
West Yorkshire
WF2 7UA

Calder Park - Wakefield
Contract Name

80943
Contract Number

Product manufacturer, product name, 3rd Party Approval (if approved), and fire performance

Scope of Works	Location
Nullifire FS702 Intumastic ETA – 21/0010 is used to provide up to 60 minutes fire separation.	Used in conjunction with Intubatt systems to provide up to 60 minutes fire separation. As per Firetronic Report
Nullifire FS709 HP Intumastic, ETA – 20/1314, is used to provide up to 60 minutes fire separation..	Used in conjunction with Intubatt systems to provide up to 60 minutes fire separation. As per Firetronic Report
Nullifire FP302 Intustrap, ETA-20 12/19 is used to provide up to 60 minutes fire separation.	Used in conjunction with Intubatt 2 for combustible elements through fire rated walls. as per attached Firetronic Report
Nullifire FB750 Intubatt 2, ETA -20/1319, is used to provide up to 60 minutes fire separation.	Fire stopping to service penetrations though fire rated partitions as per attached Firetronic Report
Sherwin Williams FX5062,CF5267, paint is used to provide 60 minutes fire protection.	Used to protect selected beams and columns of the main office and welfare office
Sherwin Williams FX5090, CF5188, paint is used to provide 60 minutes fire protection.	Used to protect selected beams and columns of the main office and welfare office
Nullifire FJ220 Intubatt 3 DS, ETA -20/1319, used to provide up to 60 minutes fire separation.	Used as a horizontal cavity barrier to close Whitewall void
Nullifire FJ220 Intubatt 3 SS, ETA -20/1319, used to provide up to 60 minutes fire separation.	Used as a horizontal cavity barrier to close edge of slab to cladding

LPCB®

LPS 1531: Issue 1 — Certificate of Conformity

Certificate No. 889Pla001289

Schedule Continued:

Scope of Works	Location
Firehalt Ultralite 60, IFC1336 Cavity Barrier is used to provide 60/15 integrity / insulation.	Used above suspended ceilings to provide 60/15 integrity / insulation fire separation- As shown on 'htc architects' drawing 110 P2

Works not completed or excluded	Location
Any works not listed above.	All other locations.

Ivor Seabrook - Contract Manager
Name, Position

Signature

G&A Fire Protection Limited
For and on behalf of

22 September 2022
Issue date

LOSS PREVENTION CERTIFICATION BOARD LPCB

Company Certificate
No. 889Pla

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Cleaning and Maintenance Regimes

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Cleaning and Maintenance Regimes

This maintenance schedule for Calder park, Wakefield is to be followed from PC date year on year to ensure all plant and equipment is kept within warranty.

Please keep a log of these inspections so that records can be checked should an issue arise.

Code; ✓ Blue – Recommended ✓ Red – To Maintain Warranty

Item	Daily	Weekly	Monthly	3 Months	6 Months	9 Months	Annually	10 Yearly	Regime
Intumescent Paint							✓	✓	The Intumescent paint we apply is usually 10 years to first maintenance (And isn't accessible except In the case of on fire boundaries). The only time we would expect it to be remediated/ to have maintenance done is if there's damage to i.e., through impact. Therefore, an inspection of paint condition where possible should potentially be done annually.
Whitewall				✓				✓	With Whitewall, usually for lifetime of building, the only maintenance being when / if there are any spills or impacts to the wall.
Fire-Curtains				✓				✓	Fire curtains should be surveyed / maintained wherever there is maintenance work on above ceiling mechanical and electrical services to ensure no damage has been caused.

Data Sheets

winvic

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Cl/SfB			
		(29)	(K2)
CAW P10 Uniclass JP10:L68114			

Nullifire
Smart Protection

Product Information

Description
FB750 Intubatt is a lightweight 4 hour fire barrier comprising of a rock mineral fibre board with an uniquely identifiable ablative coating, containing Optifire™ technology.

Usage / Purpose
FB750 is designed to reinstate the fire performance of compartment walls and floors which have been breached by penetrating services, providing a fire, smoke, thermal, acoustic and air pressure seal.

FB750 must be used in conjunction with FS702 Intumastic to be suitable for sealing around the following service types: non-combustible pipes, cable trays, ladders and baskets (perforated or non-perforated), armoured cables, data cables, HV cables, cable bundles up to 100 mm.

FB750 can be used on flexible walls & rigid walls (100 mm or wider), rigid floors (150 mm or wider), and beneath raised access floors / suspended floors.

When used with a Nullifire closer device (FS709 Intumastic HP, FP302 Intustrap, FP160 Intusleeve, FP170 Intucollar), FB750 Intubatt also becomes suitable for penetrating combustible pipes & conduits such as PVC, PE, PP, HDPE, PPR, PEX, Uponor and combustible ducting.

FB750 has also been tested to fire protect the underside of loaded timber floors for up to 120 minutes (BS 476 Pt 21). Typical areas of use include: health and leisure facilities, schools, universities, commercial buildings, hospitals, retail and industrial units and nuclear power plants.

Available Sizes
Dimensions
1200 x 600 x 50 mm (+-3 mm)

Density
140 kg/m³ core
or
180 kg/m³ core on request

Coating thickness
1 mm (-0/+3 mm)

Packaging
Supplied individually in clearly identifiable packaging (or in pallet quantities).

Availability
Direct from Tremco CPG UK Limited (see details on this TDS).

Usage Guidelines

Always read SDS, pre-application guidance, method statement and relevant application detail prior to application. Ensure the latest documents are downloaded prior to every project commencement.

Preparation
- Clean all abutting surfaces, ensuring loose particles, oils, grease or corrosive material have been removed.
- Ensure all services passing through the compartment penetration are suitable for use with FB750 and have been installed to the satisfaction of all relevant parties (we recommend checking TDS's as supplied by the manufacturer of the service).
- Identify all services types and ensure you have the required suitable Nullifire ancillary products available (e.g. FS709 Intumastic HP).

Installation
- Measure the size of the opening and relevant centre positions of all services penetrating the compartment opening. Transfer these measurements to the face of the FB750. For pattress fit (surface mounted), the required overlap is typically 75 mm (may be reduced for ceiling shadow lines and other obstacles - contact Technical Services).
- Ascertain the fewest number of cuts required and, using a suitable tool, cut the FB750 to to the required and measured dimensions, allowing for 2 to 3 mm compression overall.
- Apply FS702 to the areas of the opening and services that will contact the FB750. If required, use the suitable Nullifire ancillary product as per the requirements on the relevant product TDS.
- Install the cut pieces of FB750 into the opening, ensuring compression and bond using FS702 (consult method statement or application details). **FB750 must not be dry fitted.**

FB750

Intubatt Coated Batt

up to 240 mins

Key Benefits Summary
- **Up to 4 hours fire resistance - Tested to EN 1366-3 (up to 2.16 m² opening) and to BS 476 Pt 20/22 tested (up to 7.2 m² opening with framework)**
- **Optifire™ unique traceability identifier**
- **Acoustic & smoke sealing**
- **Air pressure tested up to 2000 Pa**
- **Suitable for use in flexible & rigid walls, rigid floors and under timber floors**
- **Easy to cut**
- **Allows for the thermal expansion of the services in ambiant conditions**

This product is certified to applicable European (EN) standards and UL-EU Mark service requirements.
CERT. N° UL-EU-01058-CPR

UL EU

CE
ETA 17/0392

certifire
APPROVAL N° CF5343

up to 240 mins

FB750

Intubatt Coated Batt

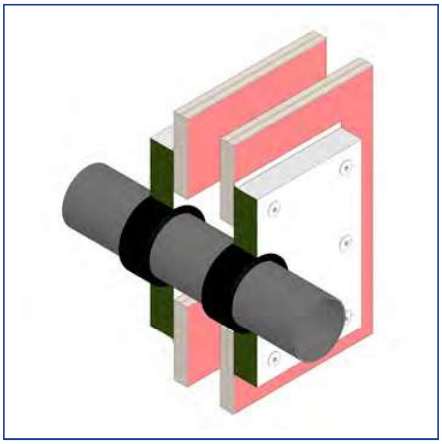
Nullifire Smart Protection

- Repeat the above ensuring FB750 and any required Nullifire ancillary product required for the relevant service type until the opening is completely fire sealed and airtight.
- Seal all joints, service, substrate abutments and irregularities using FS702, to ensure a complete fire, smoke, and air pressure and acoustic seal.
- In order to ensure the required EI (integrity & insulation) of the compartment or fire strategy to all services have been reinstated correctly, Nullifire FI025/FI040 Insulation Wraps may be required to be applied around services abutting the FB750 barrier.
- If a double FB750 seal is to be utilised it is recommended joints should be staggered where possible.

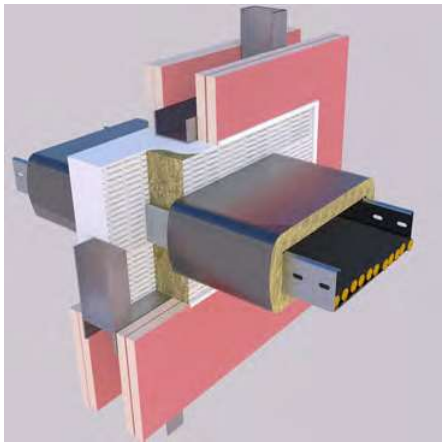
Important Information

- A foil barrier is required around sensitive pipework (such as C-PVC).
- If used around Pegler X-Press Carbon Steel pipes, the pipe manufacturer should be consulted, and their recommendations followed.

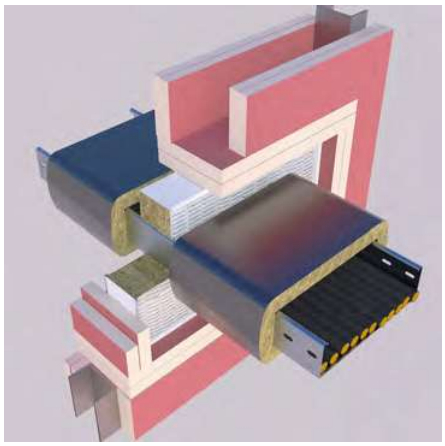
Typical Details



FB750 double batt pattress fit
+ FP302 Intustrap : up to EI120



FB750 double batt with FI025 Intuflex: EI120 when tested with the EN cable set



FB750 single batt with FI025 Intuflex: EI60 when tested with the EN cable set

up to 240 mins

FB750
Intubatt Coated Batt

Nullifire
Smart Protection

Technical information

Property	Test Method	Result
Composition		Compressed rock fibre, coated both sides
Dimensions		1200 x 600 x 50 mm
Manufacturing Tolerances		±3 mm
Available Densities		140 kg/m³ 180 kg/m³
Acoustic Rating	BS EN ISO 10140:2-2010	up to 57 dB for the 140 kg/m³ version up to 59 dB for the 180kg/m³ version
Durability	EN 13162 or EN 14303, EN ISO 1519	Z1
Reaction to Fire	EN 13501-1	Class E
Air Permeability	BS EN ISO 1023:2	Air tight up to 2,000 Pa
Application Temperature		+5°C to +60°C
Service Temperature		Maximum +70°C
Maximum Continuous Operating Temperature		+500°C (discoloration will occur)
Storage	Store in dry conditions between -10°C and +70°C. Do not store directly on concrete floors.	
Shelf Life	Unlimited when stored as advised.	

Health & Safety Precautions
Safety data sheet must be read and understood before use.

Technical Service
Tremco CPG UK Limited has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 01322 551010.

Guarantee / Warranty
Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge.

No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.
Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.
It is a requirement of the installer to ensure suitability and compatibility of all elements before installation commences and that compliance can be achieved as required.

Construction Products Group Europe
www.cpg-europe.com

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2020-07

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Nullifire FB750**

· **MSDS code:** W-N-FB750
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Fire retarding agent

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
tremco illbruck Ltd
Coupland Road, Hindley Green, WIGAN, WN2 4HT
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410
msds@tremco-illbruck.com

· **Further information obtainable from:**
tremco illbruck Ltd
Coupland Road, Hindley Green, Wigan, WN2 4HT
T: +44 (0) 1942251400, F: +44 (0) 1942251410
www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), 01 809 2166 (ROI), or otherwise to contact a doctor.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Not applicable.
The product is not classified, according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:**
High-density inert mineral fibreboard coated on 1 or 2 sides with a water-based acrylic coating at 1mm thickness.
Article of substances listed below with non-hazardous additions.

· **Dangerous components:** Void
· **SVHC** -
· **Additional information:**
For the wording of the listed hazard phrases refer to section 16.
This product is an "article" as defined under the REACH Regulation (EC) 1907/2006 Title I, Chapter 2, Article 3.
Out of scope for safety data sheet requirements under the REACH Regulation (EC) 1907/2006 Title IV, Article 31.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Not applicable.
· **4.2 Most important symptoms and effects, both acute and delayed**
Prolonged skin contact may cause redness and irritation.
Dust may irritate the eyes and respiratory system.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

(Contd. of page 2)

Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Ensure adequate ventilation.
Wear protective clothing.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose of contaminated material as waste according to Section 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Prevent formation of dust.
Avoid contact with the eyes and skin.
Wear suitable protective clothing and gloves.
· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:** Store away from water.
· **Further information about storage conditions:**
Store in dry conditions.
Protect from humidity and water.
Storage temperature: +5°C to +35°C
Store horizontally.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

(Contd. of page 3)

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Wear suitable protective clothing and gloves.
Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing
Avoid contact with the eyes and skin.
Do not breathe dust.
· **Respiratory protection:**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
Use suitable respiratory protective device when high concentrations are present.


Dust/Particulate mask.

Filter FFP1
or
Filter FFP2
Use suitable respiratory protective device in case of insufficient ventilation.
For further guidance,
please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".
· **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
Strong material gloves
Leather gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**


Tightly sealed goggles

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

(Contd. of page 4)

· **Body protection:**

Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solid material
Colour:	Whitish
· **Odour:**	Odourless
· **Melting point/freezing point:**	Undetermined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	> 250 °C
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density:**	Not determined.
· **Solubility in / Miscibility with water:**	Insoluble.
· **Solvent content:**	
Solids content:	100 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Possible in traces.
Carbon monoxide and carbon dioxide

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

(Contd. of page 5)

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Slight irritation possible.
· **Serious eye damage/irritation** Dust may irritate the eyes and respiratory system.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Subacute to chronic toxicity:** Not applicable.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity**
Based on available data, the classification criteria are not met.
CAS 287922-11-6
IARC Group 3 (not classifiable as to its carcinogenicity to humans)
Prevent formation of dust.
Avoid breathing dust.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

*
SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** The product is not easily, but potentially biodegradable.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Avoid transfer into the environment.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** Disposal must be made according to official regulations.
· **European waste catalogue**
2008/98/EC (UK WM3) : n/a

17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

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· **Uncleaned packaging:**
· **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
HSE EH40/2005 Workplace Exposure Limits (as amended)
Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)
2001/118/EC as regards the list of wastes
2008/98/EC on waste

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
No further relevant information available.

· **Information about limitation of use:** No further relevant information available.

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.11.2019 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FB750

(Contd. of page 7)

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**
Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

· *** Data compared to the previous version altered.**

Cl/SfB			
		(29)	(K2)
CAW P10 Uniclass JP10:L68114			

Nullifire
Smart Protection

Product Information

Description
FJ220 Intubatt 3 is supplied pre-configured, ablative coated and factory cured. FJ220 is a rock fibre compressible slab, with an ablative coating to provide a fire and smoke seal. We offer 2 options:
- single coated for horizontal seals
- double coated for vertical seals

Usage / Purpose
FJ220 is a strong, fast-fit flexible fire seal for curtain wall, slab edge and vertical cladding applications.
The system requires no fixings* for horizontal gaps up to 200 mm when used against a non-combustible building envelope.
The system can offer an acoustic capability of up to 52 dB (floor slab), limited by substrate.
The application of FS702 Intumastic to all joints and substrates is required to create an effective smoke seal.
For use within floor seals, slab to slab, slab to cladding, slab to blockwork, slab to glazing.
Combustible pipework, steel pipework and cables can be accommodated.
Please consult CPG UK Technical Services for detailed solutions.

Available Sizes
Dimensions
1200 x 600 x 100 mm ±3 mm

Colour
Off-white (coating)

Packaging
Supplied individually in clearly identifiable packaging (or in pallet quantities).

Availability
Direct from Tremco CPG UK Limited (see details on this TDS).

Usage Guidelines

Always read SDS, pre-application guidance and relevant application detail prior to application. Ensure the latest documents are downloaded prior to every project commencement.

Preparation
- Clean all abutting surfaces, ensuring loose particles, oils, grease and corrosive material have been removed.

Typical Installation
- Measure the gap width of the opening to be sealed.
- Cut FJ220 into strips lengthways to the width of opening plus suitable movement allowance (accommodating a maximum size) plus 5 to 10 mm above maximum gap size expected.
- Under compression, install the cut length of FJ220. Where the opening width exceeds 50 mm or the cladding system is non-fire rated, either edge clips or V-lock spikes will be required to provided sufficient support in relation to gap width.
  The clip is fixed into the slab side edge of FJ220 and mechanically fixed either to top of floor slab (Z-clip), vertical edge of floor slab (V-lock spike) or L-bracket. 3 fixings are required per 1200 mm, minimum 2 per cut piece (maximum 600 mm else 3 fixings required), at maximum 400 mm (200 mm/600 mm/1000 mm from right hand edge). Please read carefully the Fixing Information paragraph.
- All joints to all substrates, including board to board joints, should be smoke sealed using a 5 mm bead of FS702 Intumastic.
  If area is exposed to high humidity or if moisture is expected, we would recommend a suitable PU topcoat applied in accordance to the relevant manufacturer's instructions.
- This should only be used in C1 & C2 environments. For C3, C4, C5, a suitable topcoat will be required.
- When used vertically, a double coated version of FJ220 will be required, with an FS702 smoke seal to both sides.

FJ220

Intubatt 3 Cavity Barrier

up to 120 mins

optifire

Key Benefits Summary
- Up to 2 hours fire resistance - Tested to both BS 476 20-22 and BS EN 1366-4
- Optifire™ unique traceability identifier
- Cost effective solution
- Easy to install and inspect
- 52 dB acoustic performance

up to 120 mins

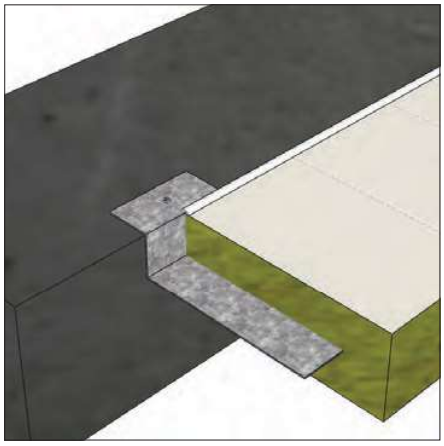
FJ220

Intubatt 3 Cavity Barrier

Nullifire Smart Protection

Typical Details

FJ220 with Z-clips on a non-combustible curtain wall



Close up of FJ220 support Z-clip

Fixing Information

- Z clips are for vertical and horizontal use, in gaps from 200 to 250 mm, or from 0 to 250 mm if the exterior cladding is not fire rated.
- V-lock spikes are for vertical and horizontal use, in gaps from 250 to 400 mm.
- L-brackets are for vertical use only, in gaps from 50 to 250 mm, or from 0 to 250 mm if the exterior cladding is not fire rated.
- All brackets must be cut to permit movement tolerances, and must pass through 75% of the FJ220 width.

Important Information

- Maximum tested opening is 450 mm width.
- Movement capability is 3 mm to 7 mm
- Can only be cut along the product 1200 mm length.
- The Integrity and Insulation rating of FJ220 may be limited to the capability of the surrounding substrates.

Storage

Store in dry conditions between -10°C and +70°C. Do not store directly on concrete floors.

Shelf Life

Unlimited when stored as recommended.

Health & Safety Precautions

Safety data sheet must be read and understood before use.

Technical Service

Tremco CPG UK Limited has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 01322 551010.

Guarantee / Warranty

Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge.

No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

It is a requirement of the installer to ensure suitability and compatibility of all elements before installation commences and that compliance can be achieved as required.

Construction Products Group Europe
www.cpg-europe.com

Tremco CPG UK Limited
Coupland Rd, Hindley Green
Wigan WN2 4HT UK
Tel: +44 (0)1942 251400

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2020-11

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.09.2020 Version number 4 Revision: 29.11.2019

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Nullifire FJ220**

· **MSDS code:** W-N-FJ220
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Fire retarding agent

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Tremco CPG UK Ltd
tremco illbruck Ltd
Coupland Road, Hindley Green, WIGAN, WN2 4HT
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410
msds@cpg-europe.com

· **Further information obtainable from:**
Tremco CPG UK Ltd
tremco illbruck Ltd
Coupland Road, Hindley Green, Wigan, WN2 4HT
T: +44 (0) 1942251400, F: +44 (0) 1942251410
www.cpg-europe.com, info.uk@cpg-europe.com

· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), your local GP/pharmacist (NI), 01 809 2166 (ROI), or otherwise to contact a doctor.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Not applicable.
The product is not classified, according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: Nullifire FJ220

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:**
High-density inert mineral fibreboard coated on 1 or 2 sides with a water-based acrylic coating at 1mm thickness.
Article of substances listed below with non-hazardous additions.

· **Dangerous components:** Void
· **SVHC** -
· **Additional information:**
For the wording of the listed hazard phrases refer to section 16.
This product is an "article" as defined under the REACH Regulation (EC) 1907/2006 Title I, Chapter 2, Article 3.
Out of scope for safety data sheet requirements under the REACH Regulation (EC) 1907/2006 Title IV, Article 31.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Not applicable.
· **4.2 Most important symptoms and effects, both acute and delayed**
Prolonged skin contact may cause redness and irritation.
Dust may irritate the eyes and respiratory system.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.

(Contd. on page 3)

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Trade name: Nullifire FJ220

(Contd. of page 2)

Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Ensure adequate ventilation.
Wear protective clothing.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose of contaminated material as waste according to Section 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Prevent formation of dust.
Avoid contact with the eyes and skin.
Wear suitable protective clothing and gloves.
· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:** Store away from water.
· **Further information about storage conditions:**
Store in dry conditions.
Protect from humidity and water.
Storage temperature: +5°C to +35°C
Store horizontally.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 4)

Safety data sheet
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Trade name: Nullifire FJ220

(Contd. of page 3)

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Wear suitable protective clothing and gloves.
Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing
Avoid contact with the eyes and skin.
Do not breathe dust.
· **Respiratory protection:**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
Use suitable respiratory protective device when high concentrations are present.


Dust/Particulate mask.

Filter FFP1
or
Filter FFP2
Use suitable respiratory protective device in case of insufficient ventilation.
For further guidance,
please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".
· **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
Strong material gloves
Leather gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**


Tightly sealed goggles

(Contd. on page 5)

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Trade name: Nullifire FJ220

(Contd. of page 4)

· **Body protection:**

Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solid material
Colour:	Whitish
· **Odour:**	Odourless
· **Melting point/freezing point:**	Undetermined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	> 250 °C
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density:**	Not determined.
· **Solubility in / Miscibility with water:**	Insoluble.
· **Solvent content:**	
Solids content:	100 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Possible in traces.
Carbon monoxide and carbon dioxide

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.09.2020 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FJ220

(Contd. of page 5)

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Slight irritation possible.
· **Serious eye damage/irritation** Dust may irritate the eyes and respiratory system.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Subacute to chronic toxicity:** Not applicable.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity**
Based on available data, the classification criteria are not met.
CAS 287922-11-6
IARC Group 3 (not classifiable as to its carcinogenicity to humans)
Prevent formation of dust.
Avoid breathing dust.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

*
SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** The product is not easily, but potentially biodegradable.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Avoid transfer into the environment.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** Disposal must be made according to official regulations.
· **European waste catalogue**
2008/98/EC (UK WM3) : n/a

17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.09.2020 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FJ220

(Contd. of page 6)

· **Uncleaned packaging:**
· **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
HSE EH40/2005 Workplace Exposure Limits (as amended)
Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)
2001/118/EC as regards the list of wastes
2008/98/EC on waste

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
No further relevant information available.

· **Information about limitation of use:** No further relevant information available.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.09.2020 Version number 4 Revision: 29.11.2019

Trade name: Nullifire FJ220

(Contd. of page 7)

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**
Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

· *** Data compared to the previous version altered.**

Cl/SfB			
		(29)	(k2)
CAW P10			
Uniclass JP10:L68114			

Nullifire
Smart Protection

Product Information

Description
FS702 Intumastic is a water-based acrylic sealant which cures to give a firm but flexible fire seal. Suitable for use in various construction joints offering up to 30% movement capability whilst providing an excellent acoustic and air seal.
FS702 is suited for use around non-combustible services, cables, rock fibre insulated non-combustible pipes, using a minimum depth of 25 mm. FS702 has excellent adhesive qualities and can also be used for the bonding and pointing of joints and service penetrations in conjunction with FB750 Intubatt system.

Usage / Purpose
FS702 is suitable for a variety of applications:
- Static & movement linear joints (masonry/flexible wall to masonry/ rigid wall/rigid floor/flexible wall)
- Window & door joints (masonry to timber/steel)
- FB750 to flexible wall/rigid wall/rigid floor
- Cold smoke seal
- Service penetrations sealing: copper & steel pipes, cable bundles / trays / ladders (with and without FI025 Intuflex Insulation Wrap)
- FS702 is also suitable for service movement joints (consult Technical Services).

Colours
White.
Grey is available on request (may be subject to minimum order quantities).

Packaging
Gun Grade:
310 ml cartridges (12 per box/25 per box)
600 ml sausages (12 per box)
Trowel Grade: 5 litre bucket

Availability
Direct from Tremco CPG UK Limited (see details on this TDS).

Usage Guidelines

Always read SDS, pre-application guidance and relevant application detail prior to application. Ensure the latest documents are downloaded prior to every project commencement.

Protective Equipment
Use in well ventilated conditions and ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to safety data sheet.

Necessary Tools
- Sealant caulking gun
- Sealant profiling tool/spatula
- Masking tape (if decorative finish is required to surrounding substrates)

Preparation
- All surfaces must be clean and sound, free from dirt, grease and other contamination.
- Wood, plaster and brick may be damp but not running wet.
- Porous or high gloss surfaces require priming prior to application.
- If a clean line is required on adjoining substrates, masking tape should be used.
- Check specification is suitable for movement, fire rating and gap size required.

Application
- Insert required backing material (refer to performance on backing materials), oversized to joint width to ensure stability, to provide correct depth of seal.
- A light water spray will aid adhesion if a rock mineral fibre backer has been applied.
- Using a sharp knife, cut nozzle of cartridge to bead size and angle required.
- Gun sealant into gap to required depth by applying an even pressure to the trigger.
- Work and tool to a smooth finish immediately with a wet profiling tool or spatula.

FS702

Intumastic Fire Resistant Acrylic Sealant

up to 240 mins

optifire

Key Benefits Summary

- **Up to 4 hours fire resistance - Tested to EN 1366-4, EN 1366-3 and BS 476 Pt 20-22**
- **Up to 30% movement capability (during fire test)**
- **Suitable for flexible walls and rigid walls & floors**
- **Used for sealing FB750 Intubatt**
- **Acoustics up to 55 dB**
- **Air seal up to 2,000 Pa**
- **Optifire™ unique traceability identifier**

This product is certified to applicable European (EN) standards and UL-EU Mark service requirements.
CERT. N° UL-EU- 01059-CPR

UL EU

CE
ETA 17/0390; ETA 19/0609

certifire
APPROVAL N° CF5347

up to 240 mins

FS702

Intumastic Fire Resistant Acrylic Sealant

Nullifire Smart Protection

Important Information

- A foil barrier is required around sensitive pipework (such as C-PVC).
- If used around Pegler X-Press Carbon Steel pipes, the pipe manufacturer should be consulted, and their recommendations followed.

Coverage

To determine quantity of sealant required, calculate as following example (in mm):

$$\frac{\text{Gap Width} \times \text{Depth} \times \text{Total Length}}{310} = \text{N° of cartridges}$$

For further guidance on application methods, and material requirements, please contact Tremco CPG UK Limited Technical Services Department.

Cleaning

Immediately remove all excess sealant and masking tape before cure. Clean tools in warm water. Cured sealant can only be removed mechanically.

Health & Safety Precautions

Safety data sheet must be read and understood before use.

Technical Service

Tremco CPG UK Limited has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 01322 551010.

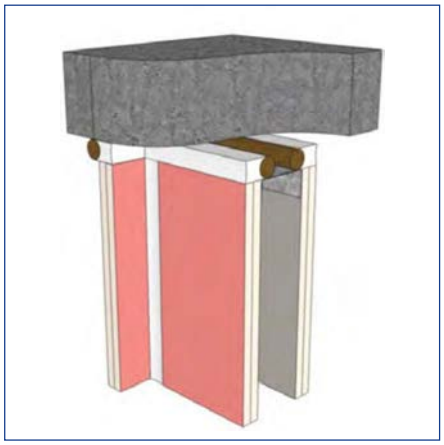
Guarantee / Warranty

Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge.

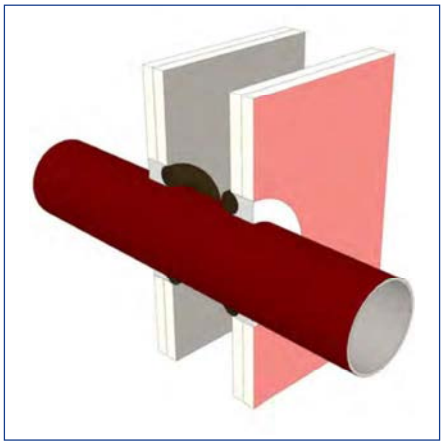
No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

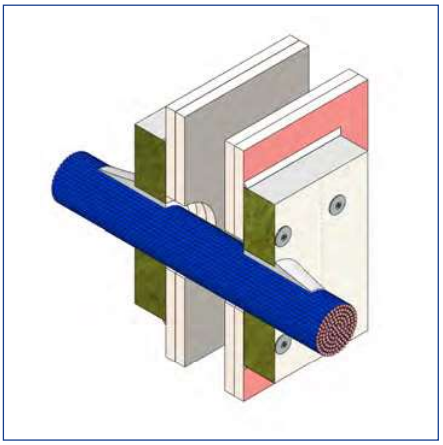
Typical Details



FS702 Intumastic plasterboard to concrete linear gap seal with PE backer rod: EI120



FS702 Intumastic seal for non-combustible pipe penetration through drywall: E120 EI30 (EI120 can be achieved with FI025 Intuflex)



FB750 Intubatt Pattress Fit + FS702 Intumastic seal & bond for cable penetration through drywall: EI120

up to 240 mins

FS702

Intumastic Fire Resistant Acrylic Sealant

Nullifire Smart Protection

Technical information

Property	Test Method	Result
Composition		Water-based acrylic sealant
Acoustic Rating	BS EN ISO 10140:2-2010	up to 55 dB
Air Permeability	BS EN ISO 1023:2	Air tight up to 2,000 Pa
Solids Content		78% to 82%
pH Value		8.2 to 9.5
Specific Gravity		1.50 to 1.56
Viscosity		Thixotropic
Shore A Hardness		~ 30
Touch Dry	at 20°C	30 minutes
Cure Rate	at 20°C	1 mm/day
Maximum Continuous Service Temperature		70°C
Storage	Store in dry conditions between +5°C and +40°C. Product may be left for short periods (not exceeding 72 hours) at temperatures as low as -5°C. Allow product to defrost for 24 hours at +10°C before use.	
Shelf Life	36 months when stored as recommended in original unopened containers.	

Backing Material

This section relates to the change of material used to back a seal or sealant as part of a sealing system for apertures for penetrations of multiple services and linear joint seals. Backing material may not be omitted unless full fill is achieved.

Backing Material	Effect	Comment
Polyethylene / Polyurethane Rod	= or +	May be replaced by mineral wool
Glass Wool	= or +	May be replaced by stone wool or ceramic wool
Stone Wool	= or +	May be replaced by ceramic wool
Ceramic Wool (including ceramic alternatives)	=	May only be replaced by alternative material of equivalent material properties, i.e. density, thermal conductivity, melting point, shrinking, reaction to fire classification - for example alkaline earth silicate fibres
Increase in backing material depth	+	Acceptable for class A1 and A2 materials.
Decrease in backing material depth	-	Not acceptable.

up to 240 mins

FS702

Intumastic Fire Resistant Acrylic Sealant

Nullifire Smart Protection

Performance Data

Fire performance in accordance with EN1366-4 testing.
Key to abbreviations: E = Integrity, I = Insulation, AAC = Aerated Concrete, H = Horizontal, V = Vertical, T = Horizontal on a vertical plane, W = Width range, X = no Movement fire tested (<= 7.5%), M = Movement fire tested, F = Joint tested in backing material, B = no Joint tested in backing material (or combustible backing material used, no joint required to be tested).

Substrate	Backing Material	Installation	Sealant Depth (in mm)	Classification		
				Integrity & Insulation	Application & Usage	Gap Width Range
FLOOR JOINTS FS702 Linear Joint Seals in Rigid Floors 150 mm thick (min.)						
AAC-AAC	Rock Fibre Backer	Top Side	3	EI240	H – X – F	W 5-200
AAC-AAC	Rock Fibre Backer	Top Side	3	EI240	H – M30 – F	W 5-120
AAC-Concrete	Rock Fibre Backer	Top Side	10	EI240	H – X – F	W 5-10
AAC-Concrete	Rock Fibre Backer	Top Side	35	EI240	H – X – F	W 5-35
AAC-Concrete	PE Backer Rod	Top Side	30	EI120	H – X – F	W 5-35
AAC-Concrete	PE Backer Rod	Top Side	50	EI240	H – X – F	W 5-35
AAC-Steel	PE Backer Rod	Top Side	30	E240 EI30	H – X – F	W 5-35
AAC-Timber	PE Backer Rod	Top Side	30	EI90	H – X – F	W 5-35
AAC-Timber	PE Backer Rod	Top Side	50	EI180	H – X – F	W 5-35
WALL JOINTS FS702 Linear Joint Seals in Flexible Walls 100 mm thick (min.)						
Drywall-Concrete	PE Backer Rod	Both Sides	10	EI60	V – X – B	W 5-10
Drywall-Concrete	PE Backer Rod	Both Sides	25	EI90	V – X – B	W 5-50
Drywall-Concrete	PE Backer Rod	Both Sides	10	EI120	T – X – B	W 5-10
Drywall-Concrete	PE Backer Rod	Both Sides	25	EI120	T – X – B	W 5-50
Drywall-Concrete	Rock Fibre Backer	Both Sides	6	EI90	V – X – F	W 5-10
Drywall-Concrete	Rock Fibre Backer	Both Sides	15	E90 EI60	V – X – F	W 5-35
Drywall-Drywall	PE Backer Rod	Both Sides	15	EI60	V – X – B	W 5-30
Drywall-Steel	PE Backer Rod	Both Sides	10	E90 EI60	V – X – B	W 5-10
Drywall-Steel	PE Backer Rod	Both Sides	25	E60 EI45	V – X – B	W 5-50
Drywall-Steel	PE Backer Rod	Both Sides	10	E120 EI90	T – X – B	W 5-10
Drywall-Steel	PE Backer Rod	Both Sides	25	EI90	T – X – B	W 5-50
Drywall-Timber	PE Backer Rod	Both Sides	10	EI90	V – X – B	W 5-10
Drywall-Timber	PE Backer Rod	Both Sides	25	EI90	V – X – B	W 5-50
Drywall-Timber	PE Backer Rod	Both Sides	10	EI90	T – X – B	W 5-10
Drywall-Timber	PE Backer Rod	Both Sides	25	EI90	T – X – B	W 5-50
WALL JOINTS FS702 Linear Joint Seals in Rigid Walls 100 mm thick (min.)						
AAC-AAC	PE Backer Rod	Both Sides	17.5	EI240	V – X – F	W 5-35
AAC-AAC	PE Backer Rod	Opposed Side to Fire	17.5	E240 EI90	V – X – F	W 5-50
AAC-Steel	PE Backer Rod	Both Sides	17.5	E240 EI120	V – X – F	W 5-35
AAC-Timber	PE Backer Rod	Both Sides	17.5	EI120	V – X – F	W 5-35
AAC-Timber	PE Backer Rod	Both Sides	35	EI180	V – X – F	W 5-35
WALL JOINTS FS702 Linear Joint Seals in Rigid Walls 150 mm thick (min.)						
AAC-AAC	Rock Fibre Backer	Both Sides	5	EI240	V – X – F	W 5-10
AAC-AAC	Rock Fibre Backer	Both Sides	17	EI240	V – X – F	W 5-35
AAC-AAC	Rock Fibre Backer	Both Sides	40	EI240	V – X – F	W 5-40
AAC-AAC	Rock Fibre Backer	Both Sides	5	EI240	T – X – F	W 5-10
AAC-AAC	Rock Fibre Backer	Both Sides	17	EI240	T – X – F	W 5-35

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2020-12

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.02.2020 Version number 6 Revision: 19.02.2020

*
SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Nullifire FS702**

· **MSDS code:** TK-N-FS702
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Sealant

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
tremco illbruck Ltd
Coupland Road, Hindley Green, WIGAN, WN2 4HT
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410
msds@tremco-illbruck.com

· **Further information obtainable from:**
tremco illbruck Ltd
Torrington Avenue, Coventry, CV4 9TJ
T: +44 (0) 2476855000, F: +44 (0) 2476469547
www.nullifire.com, protect@nullifire.com

tremco illbruck Ltd
Coupland Road, Hindley Green, Wigan, WN2 4HT
T: +44 (0) 1942251400, F: +44 (0) 1942251410
www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), 01 809 2166 (ROI), or otherwise to contact a doctor.

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified, according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Supplemental information:**
EUH208 Contains CIT [EC 247-500-7] : MIT [EC 220-239-6] (3:1), 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.
EUH210 Safety data sheet available on request.
· **Regulation (EC) No 528/2012 on biocidal products** Contains a biocidal product: C(M)IT/MIT (3:1)

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· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:** Void
· **SVHC** -
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

· **Regulation (EU) No 528/2012 Biocidal Products Regulation**		
CAS: 55965-84-9	CIT [EC 247-500-7] : MIT [EC 220-239-6] (3:1)	PT6

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Sensitising effect by skin contact is possible by prolonged exposure.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Carbon dioxide (CO2)
Carbon monoxide (CO)

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· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Avoid contact with the eyes and skin.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.
· **Information about storage in one common storage facility:** Protect from heat and direct sunlight.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from frost.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Use only in well-ventilated areas.

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Use suitable respiratory protective device in case of insufficient ventilation.
For further guidance,
please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".

· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
Rubber gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses

· **Body protection:**

Protective work clothing

*
SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Pasty
Colour:	According to product specification
· **Odour:**	Mild
· **pH-value at 20 °C:**	8.2 - 9.5
· **Melting point/freezing point:**	Undetermined.
· **Flash point:**	Not applicable.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density at 20 °C:**	1.52 g/cm³
· **Solubility in / Miscibility with water:**	Fully miscible.
· **Solvent content:**	
VOC (EU)	6.3 g/L

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VOC (EC)	< 0.5 %
Solids content:	78 - 82 %
· **9.2 Other information**	No further relevant information available.

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** Protect from frost.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Slight irritation possible.
· **Serious eye damage/irritation** Slight irritation possible.
· **Respiratory or skin sensitisation** May cause allergic skin disorders in sensitive individuals.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Other information:**
This product contains no substances in Annex I to Directive EC 1005/2009 concerning ozone depleting substances

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Trade name: Nullifire FS702

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· **Additional ecological information:**
· **General notes:**
Not known to be hazardous to water.
Recommendation:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Disposal must be made according to official regulations.
UK (WM3) : n/a

· **European waste catalogue**	
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09

· **Uncleaned packaging:**
· **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.

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· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

*
SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
"BPR" Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.
Regulation (EU) 2016/131 of 1 February 2016 approving C(M)IT/MIT (3:1) as an existing active substance for use in biocidal products for product-types 2, 4, 6, 11, 12 and 13.
HSE EH40/2005 Workplace Exposure Limits (as amended)
Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)
2001/118/EC as regards the list of wastes
2008/98/EC on waste

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**
Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 23.04.2020 Version number 4 Revision: 23.04.2020

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Nullifire FS702 (brush grade)**

· **MSDS code:** W-N-FS702BG
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Coating

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
tremco illbruck Ltd
Coupland Road, Hindley Green, WIGAN, WN2 4HT
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410
msds@tremco-illbruck.com

· **Further information obtainable from:**
tremco illbruck Ltd
Coupland Road, Hindley Green, Wigan, WN2 4HT
T: +44 (0) 1942251400, F: +44 (0) 1942251410
www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), 01 809 2166 (ROI), or otherwise to contact a doctor.

*

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified, according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Supplemental information:**
EUH208 Contains 2-methyl-2H-isothiazol-3-one, CIT [EC 247-500-7] : MIT [EC 220-239-6] (3:1), 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.
EUH210 Safety data sheet available on request.
· **Regulation (EC) No 528/2012 on biocidal products** Contains a biocidal product: C(M)IT/MIT (3:1)
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 23.04.2020 Version number 4 Revision: 23.04.2020

Trade name: Nullifire FS702 (brush grade)

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:** Void
· **SVHC** -
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

· **Regulation (EU) No 528/2012 Biocidal Products Regulation**		
CAS: 55965-84-9	CIT [EC 247-500-7] : MIT [EC 220-239-6] (3:1)	PT6

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Sensitising effect by skin contact is possible by prolonged exposure.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Carbon dioxide (CO2)
Carbon monoxide (CO)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

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Trade name: Nullifire FS702 (brush grade)

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· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
The usual precautionary measures are to be adhered to when handling chemicals.
Avoid contact with the eyes and skin.
· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.
· **Information about storage in one common storage facility:** Protect from heat and direct sunlight.
· **Further information about storage conditions:**
Protect from frost.
Store in cool, dry conditions in well sealed receptacles.
Storage temperature: +5°C to +35°C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

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· **Respiratory protection:**
Use only in well-ventilated areas.
Use suitable respiratory protective device in case of insufficient ventilation.
For further guidance,
please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
PVC or PE gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Safety glasses
· **Body protection:**

Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Pasty
Colour:	Whitish
· **Odour:**	Mild
· **pH-value at 20 °C:**	8.5 - 9.5
· **Melting point/freezing point:**	Undetermined.
· **Initial boiling point and boiling range:**	100 °C
· **Flash point:**	Not applicable.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density at 20 °C:**	1.44 g/cm³

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· **Solubility in / Miscibility with water:**	Fully miscible.
· **Viscosity:**	
Dynamic at 20 °C:	7000 - 10000 P
· **Solvent content:**	
VOC (EU)	24.5 g/l
VOC (EC)	1.70 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** Protect from frost.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Slight irritation possible.
· **Serious eye damage/irritation** Slight irritation possible.
· **Respiratory or skin sensitisation** May cause allergic skin disorders in sensitive individuals.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.

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· **Additional ecological information:**
· **General notes:**
Not known to be hazardous to water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Disposal must be made according to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**	
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15

· **Uncleaned packaging:**
· **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.

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· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
"BPR" Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.
Regulation (EU) 2016/131 of 1 February 2016 approving C(M)IT/MIT (3:1) as an existing active substance for use in biocidal products for product-types 2, 4, 6, 11, 12 and 13.
HSE EH40/2005 Workplace Exposure Limits (as amended)
Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)
2001/118/EC as regards the list of wastes
2008/98/EC on waste

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**
Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

· *** Data compared to the previous version altered.**

Cl/SfB			
		(29)	(k2)
CAW P10 Uniclass JP10:L68114			

Nullifire
Smart Protection

Product Information

Description
FS709 Intumastic HP is a high expansion/pressure exerting, graphite intumescent sealant. FS709 expands when exposed to fire, reinstating the fire performance of compartment walls and floors which have been penetrated with services.
FS709 can be used on flexible walls & rigid walls (100 mm or wider), rigid floors (150 mm or wider), and also with FB750 Intubatt Coated Batts.

Usage / Purpose
FS709 is designed to close off gaps and penetrations in compartment walls and floors, to provide up to 4 hours fire resistance. This product has been formulated to close off combustible pipe penetrations in the event of a fire, negating the need for pipe closers or wrap systems. FS709 has been tested with the following service penetrations:
- combustible pipes up to 125 mm (ABS, PE, PP, HDPE, PVC, PEX...)
- insulated non-combustible pipes up to 160 mm ; pipe insulation types: nytrile rubber, glass fibre, rock fibre up to 60 mm insulation wall thickness
- individual or groups of cables, perforated & non-perforated cable trays, cable ladders, cable baskets (up to 500 mm), cable bundles (up to 100 mm)

For use in dry internal conditions only. For other conditions, such as high humidity, contact Technical Services.

Colour
Anthracite

Packaging
310 ml cartridges (12 per box/25 per box)
600 ml sausages (12 per box)

Availability
Direct from Tremco CPG UK Limited (see details on this TDS).

Usage Guidelines

Always read SDS, pre-application guidance and relevant application detail prior to application. Ensure the latest documents are downloaded prior to every project commencement.

Protective Equipment
Use in well ventilated conditions and ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to safety data sheet.

Necessary Tools
- Sealant caulking gun
- Sealant profiling tool/spatula
- Masking tape (if decorative finish is required to surrounding substrates)

Preparation
- All surfaces must be clean and sound, free from dirt, grease and other contamination.
- Check specification is suitable for service type, substrate, fire rating, annular space and seal depth required.
- We recommend that the surface of substrate temperature be +5°C or above at the time of application. Contact Technical Services for advice regarding lower temperature application.

Application
- Insert required backing material (refer to performance on backing materials), oversized to opening to ensure stability, to provide correct depth of seal.
- Using a suitable tool, cut nozzle of cartridge to bead size and angle required.
- Gun sealant into gap to required depth by applying an even pressure to the trigger.
- Work and tool to a smooth finish immediately with a wet profiling tool or spatula.
- If used around Pegler X-Press Carbon Steel pipes, the pipe manufacturer should be consulted, and their recommendations followed.
- A foil barrier is required around sensitive pipework (such as C-PVC).

FS709

Intumastic HP Intumescent Sealant

up to 240 mins

Key Benefits Summary

- **Up to 4 hours fire resistance - Tested to EN 1366-3 and EN 1366-4**
- **Versatile & easy to apply**
- **Can be used with FB750 Intubatt Coated Batt**
- **Tested with combustible pipes up to 125 mm, insulated non-combustible pipes up to 160 mm, cables, cable trays/ ladders/baskets (up to 500 mm), cable bundles (up to 100 mm)**
- **Tested in openings up to 600 x 600 mm**
- **Tested for use in linear gaps up to 25 mm**

This product is certified to applicable European (EN) standards and UL-EU Mark service requirements.
CERT. N° UL-EU-01061-CPR

UL EU

CE
ETA 17/0388

certifire
APPROVAL N° CF5609

up to 240 mins

FS709

Intumastic HP Intumescent Sealant

Nullifire Smart Protection

Coverage

To determine quantity of sealant required, calculate as following example (in mm):

$$\frac{\text{Gap Width} \times \text{Depth} \times \text{Total Length}}{310} = \text{N° of cartridges}$$

For further guidance on application methods, and material requirements, please contact Tremco CPG UK Limited Technical Services Department.

Maintenance

No maintenance required after installation. Routine inspection recommended to ensure no damage.

Health & Safety Precautions

Safety data sheet must be read and understood before use.

Technical Service

Tremco CPG UK Limited has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on +44 (0)1322 551010.

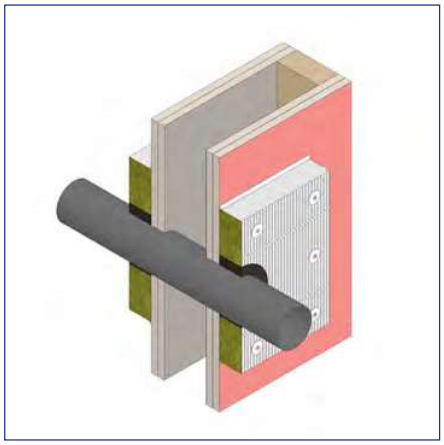
Guarantee / Warranty

Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge.

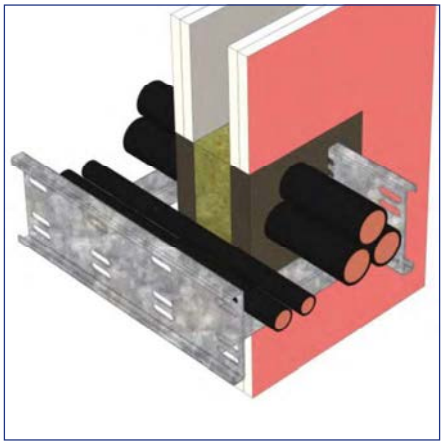
No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

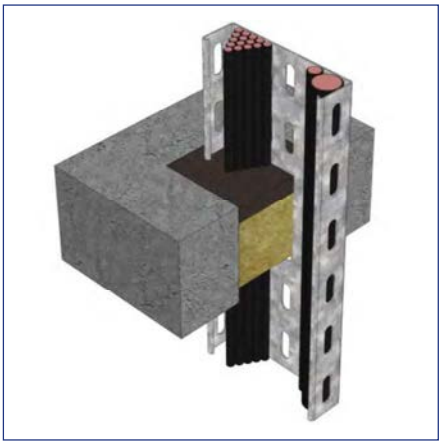
Typical Details



FB750 double batt pattress fit + FS709 Intumastic HP seal: EI120



FS709 Intumastic HP direct in drywall opening with various service penetration: EI120



FS709 Intumastic HP direct in concrete floor opening with cable tray & cables : EI120

up to 240 mins

FS709

Intumastic HP Intumescent Sealant

Nullifire Smart Protection

Technical information

Property	Test Method	Result
Composition		Water-based graphite sealant
Specific Gravity		1.3
Viscosity		Thixotropic
Durability	EN 13162 or EN 14303, EN ISO 1519	Z1
Reaction to Fire	EN 13501-1	Class E
Hardness Shore A		~ 77
Skin Formation Time		60 - 120 minutes depending on temperature & humidity
Cure Rate	at 20°C	1 mm/day
pH		8.5 - 9.5
Application Temperature		+5°C to 35°C
Service Temperature Range		-25°C to +70°C
Storage	Store in shaded dry conditions between +5°C and +35°C.	
Shelf Life	18 months when stored as recommended in original unopened containers.	

Backing Material

This section relates to the change of material used to back a seal or sealant as part of a sealing system for apertures for penetrations of multiple services and linear joint seals. Backing material may not be omitted unless full fill is achieved.

Backing Material	Effect	Comment
Polyethylene / Polyurethane Rod	= or +	May be replaced by mineral wool
Glass Wool	= or +	May be replaced by stone wool or ceramic wool
Stone Wool	= or +	May be replaced by ceramic wool
Ceramic Wool (including ceramic alternatives)	=	May only be replaced by alternative material of equivalent material properties, i.e. density, thermal conductivity, melting point, shrinking, reaction to fire classification - for example alkaline earth silicate fibres
Increase in backing material depth	+	Acceptable for class A1 and A2 materials.
Decrease in backing material depth	-	Not acceptable.

Construction Products Group Europe
www.cpg-europe.com

Tremco CPG UK Limited
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+44 (0)20 3917 1776

2020-07

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.02.2020 Version number 5 Revision: 20.02.2020

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Nullifire FS709**

· **MSDS code:** W-N-FS709
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Sealant

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
tremco illbruck Ltd
Coupland Road, Hindley Green, WIGAN, WN2 4HT
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410
msds@tremco-illbruck.com

· **Further information obtainable from:**
tremco illbruck Ltd
Coupland Road, Hindley Green, Wigan, WN2 4HT
T: +44 (0) 1942251400, F: +44 (0) 1942251410
www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), 01 809 2166 (ROI), or otherwise to contact a doctor.

*

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified, according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Supplemental information:**
EUH208 Contains CIT [EC 247-500-7] : MIT [EC 220-239-6] (3:1), 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.
EUH210 Safety data sheet available on request.
· **Regulation (EC) No 528/2012 on biocidal products** Contains a biocidal product: C(M)IT/MIT (3:1)
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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Trade name: Nullifire FS709

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:**			
EC number: 911-815-4 Reg.nr.: 01-2119486772-26-xxxx	tris(2-chloro-1-methylethyl)phosphate	Acute Tox. 4, H302	5-<10%

· **SVHC** -
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

· **Regulation (EU) No 528/2012 Biocidal Products Regulation**		
CAS: 55965-84-9	CIT [EC 247-500-7] : MIT [EC 220-239-6] (3:1)	PT6

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Sensitising effect by skin contact is possible by prolonged exposure.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Carbon dioxide (CO_2)
Carbon monoxide (CO)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.

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Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Avoid contact with the eyes and skin.
· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.
· **Information about storage in one common storage facility:** Protect from heat and direct sunlight.
· **Further information about storage conditions:**
Protect from frost.
Store in cool, dry conditions in well sealed receptacles.
Storage temperature: +5°C to +35°C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **DNELs**

· **Long term effects**		
tris(2-chloro-1-methylethyl)phosphate		
Oral	consumer	0.52 mg/kg/24h (general public) (systemic effects)
Dermal	industrial	2.08 mg/kg/24h (workers) (systemic effects)
	consumer	1.04 mg/kg/24h (general public) (systemic effects)
Inhalative	industrial	5.82 mg/m3 (workers) (systemic effects)

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	consumer	1.46 mg/m3 (general public) (systemic effects)

· **Short term effects**

tris(2-chloro-1-methylethyl)phosphate

Dermal	industrial	8 mg/kg/24h (workers) (systemic effects)
	consumer	4 mg/kg/24h (general public) (systemic effects)
Inhalative	industrial	22.4 mg/m3 (workers) (systemic effects)
	consumer	11.2 mg/m3 (general public) (systemic effects)

· **PNECs**

tris(2-chloro-1-methylethyl)phosphate

PNEC	0.64 mg/L (fresh water)
	0.064 mg/L (marine)
PNEC	1.7 mg/kg dwt (soil)
	1.34 mg/kg dwt (sediment (salt water))

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Use only in well-ventilated areas.
Use suitable respiratory protective device in case of insufficient ventilation.
For further guidance,
please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
PVC or PE gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Safety glasses

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· **Body protection:**

Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Pasty
Colour:	Grey
· **Odour:**	Weak, characteristic
· **pH-value at 20 °C:**	8.5 - 9.5
· **Melting point/freezing point:**	Undetermined.
· **Initial boiling point and boiling range:**	276 °C
· **Flash point:**	Not applicable.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density at 20 °C:**	1.3 g/cm³
· **Solubility in / Miscibility with water:**	Fully miscible.
· **Viscosity:**	
Dynamic at 20 °C:	5000 - 7000 P
· **Solvent content:**	
VOC (EU)	29 g/l
VOC (EC)	2 %
Solids content:	83 - 87 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** Protect from frost.
· **10.5 Incompatible materials:** No further relevant information available.

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· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

*
SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
tris(2-chloro-1-methylethyl)phosphate		
Oral	LD50	632 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Slight irritation possible.
· **Serious eye damage/irritation** Slight irritation possible.
· **Respiratory or skin sensitisation** Sensitising effect by skin contact is possible by prolonged exposure.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
tris(2-chloro-1-methylethyl)phosphate	
LC50/96 h	51 mg/L (pimephales promelas)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Disposal must be made according to official regulations.

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Must not be disposed together with household garbage. Do not allow product to reach sewage system.
UK (WM3) : n/a

· **European waste catalogue**	
08 04 13*	aqueous sludges containing adhesives or sealants containing organic solvents or other hazardous substances

· **Uncleaned packaging:**
· **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	Yes
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
"BPR" Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.
Regulation (EU) 2016/131 of 1 February 2016 approving C(M)IT/MIT (3:1) as an existing active substance for use in biocidal products for product-types 2, 4, 6, 11, 12 and 13.
HSE EH40/2005 Workplace Exposure Limits (as amended)

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Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)
2001/118/EC as regards the list of wastes
2008/98/EC on waste

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H302 Harmful if swallowed.

· **Department issuing SDS:**
Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity - oral – Category 4

· *** Data compared to the previous version altered.**

CI/SfB			
		(29)	(K2)
CAW P10 Uniclass JP10:L6811			

Nullifire
Smart Protection

Product Information

Description
FP302 Intustrap is a rubber based product with graphite impregnation that creates an extremely flexible pipe closure device.
The product remains dormant, until exposed to fire conditions, at which point it will expand to fill the space left by the melting combustible element.
FP302 has a release tape to one side. This permits the thermal expansion of services, if required, and eases its application, allowing the product to slide freely along the pipe to its end location.

Usage / Purpose
FP302 is a tested and proven closer device to be used around combustible pipes, insulated non-combustible pipes, and conduits (filled or empty).
FP302 is suited to a range of combustible elements, up to a maximum diameter of 160 mm in floors, and 110 mm in walls.
FP302 is required to be restrained within a suitably tested substrate or included within other Nullifire tested system solutions. These include but are not limited to: Rigid Walls and Floors, FB750 Intubatt and FR230 Intucompound.
Always refer to the relevant and correct Nullifire Application Sheet, to ensure compliance with tested methodology.

Tested Combustible Pipe Material Types
PE, HDPE, LDPE, MDPE, PPR, PVC-U, U-PVC, CPVC, DB, ABS, San-PVC, UPONOR, PEX, MLCP

Combustible pipes

Typical Insulation Types
FP302 is tested for use around the following insulation types: rock fibre/ glass fibre/phenolic/PIR/rubberoid, all with an insulation wall thickness of up to 60 mm.

Pipe insulation

Additional Products
FP302 may be used within the following Nullifire products:
- FB750 Intubatt (flexible and rigid walls, floors)
- FR230 Intucompound (rigid walls and floors)
- FI064 Soft Joint Backer (use as an annular filler for gaps up to 60mm around the FP302)
- FS702 Intumastic or FS712 Intucoat should be used as a smoke seal where required.
- FS709 Intumastic HP should be used to infill gaps created by wrapping banks and rows of combustible pipes within FP302.

Packaging
60 mm x 4 mm x 25 m rolls (1 per box)

Colour
Release paper colour may vary.

Density
1275 kg/m^3

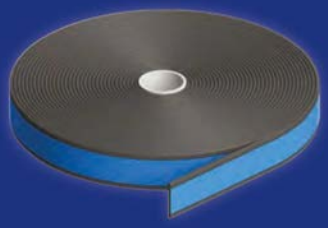
Expansion Ratio
120 times volume expansion

Availability
Direct from Tremco CPG UK Limited (see details on this TDS).

FP302

Intustrap

up to 240 mins



Key Benefits Summary

- **Up to 4 hours fire resistance - Tested to BS EN 1366-3 and BS 476 Pt 20-22**
- **Suitable for use in many substrate types**
- **Remains permanently flexible**
- **Unaffected by moisture**
- **Easy to inspect**

This product is certified to applicable European (EN) standards and UL-EU Mark service requirements.
CERT. N° UL-EU-01060-CPR

UL EU

CE
ETA 20/1318

certifire
APPROVAL N° CF5364

up to 240 mins

FP302
Intustrap

Nullifire
Smart Protection

Usage Guidelines

Always read SDS, pre-application guidance and relevant application detail prior to application. Ensure the latest documents are downloaded prior to every project commencement.

Preparation

- Clean all abutting surfaces, ensuring loose particles, oils, grease or corrosive material have been removed.
- Ensure all services passing through the compartment penetration are suitable for use with FP302 and have been installed to the satisfaction of all relevant parties (we recommend checking TDS's as supplied by the manufacturer of the service).
- Consult the relevant service manufacturer's TDS for all combustible pipes to ascertain if any special requirements may be necessary.

Installation

- Consult Application Requirement Table and apply the correct number of layers and, if required, rows, to suit both the substrate type and EI requirements.
- Locate the FP302 to the correct perceived location within the compartment reinstatement seal type chosen and secure with duct tape only to itself, to retain product layers.

Rigid Wall (limitation 160 mm combustible pipe or 60 mm wall thickness pipe insulation)

- Locate within substrate with a maximum protrusion, if possible, of 10 mm.
- Finish using the following applicable procedure.

Annular fill requirements:

- 5 to 10 mm: fill annular with FS702.
- 10 to 60 mm: fill annular with FI064 Backer + FS702
- for larger annular spaces, FB750 Intubatt or FR230 Intucompound will be required. Ensure suitable smoke seal is created using FS702/712 or FS709.

FR230 Intucompound

- Up to EI120: 1 row required (centrally located)
- Up to EI240: 2 rows required (protrusion 10 mm each face)
- Annular space: NA
- Minimum FR230 thickness: 100 mm
- If FB750 is used as FR230 shutter, FP302 may be located within with zero downward protrusion.
- If FI140 is used as FR230 shutter, FP302 may not be located within the shutter board.

Flexible Wall (limitation 110 mm combustible pipe or 60 mm wall thickness pipe insulation)

Single FB750

- Locate within FB750 with a maximum protrusion, if possible, of 10 mm or 5 mm to each side (1 row of FP302 required).

Annular fill/irregularity in cut requirements: fill space between FB750 and FP302 using FS702 to full depth (maximum irregularity 20 mm).

Double FB750

- Locate within FB750 with a maximum protrusion, if possible, of 10 mm to each exposed face (2 rows of FP302 required).

Annular fill/irregularity in cut requirements: fill space between FB750 and FP302 using FS702 to full depth (maximum irregularity 20 mm).

Pattress FB750

- Locate within FB750 with a protrusion of 0 to 10mm from each exposed face (2 rows of FP302 required).

Annular fill/irregularity in cut requirements: fill space between FB750 and FP302 using FS702 to full depth (maximum irregularity 20 mm).

Rigid Floor (limitation 160 mm combustible pipe or 60 mm wall thickness pipe insulation)

Single FB750 Intubatt: not permitted

Single FB770 Intudeck

- Locate within FB770 with a maximum protrusion, if possible, of 10 mm or 5 mm to each side (1 row of FP302 required).

Annular fill/irregularity in cut requirements: fill space between FB770 and FP302 using FS702 to full depth (maximum irregularity 20 mm).

Double FB750

- Locate within FB750 with a maximum protrusion, if possible, of 10 mm to each exposed face (1 row of FP302 required).

Annular fill/irregularity in cut requirements: fill space between FB750 and FP320 using FS702 to full depth (maximum irregularity 20 mm).

Pattress FB750

- Locate within FB750 with a protrusion of 0 to 10 mm from each exposed face (1 row of FP302 required).

Annular fill/irregularity in cut requirements: fill space between FB750 and FP320 using FS702 to full depth (maximum irregularity 20 mm).

FR230 Intucompound

- Up to EI120: 1 row required
- Up to EI240: 2 rows required
- Annular space: NA
- Minimum FR230 depth: 100 mm
- If FB750 is used as FR230 shutter, FP302 may be located within with zero downward protrusion.
- If FI140 is used as FR230 shutter, FP302 may not be located within the shutter board.

Important Information

- Individual rolls of FP302 must be separated by a release paper when stacked unpackaged.
- FP302 is tested with inspection in mind. The product should protrude from all substrates by a maximum of 10 mm. This enables easy inspection.
- FP302 may also be installed anywhere within the floor slab, up to 300 mm from the underside of the soffit. We recommend installation is either at the top or the bottom face to prevent destructive inspection requirements.
- FP302 should be installed symmetrically in flexible wall systems, within FB750 Intubatt.
- A foil barrier is required for sensitive pipework (such as CPVC).
- If used around Pegler X-Press Carbon steel pipes, the pipe manufacturer should be consulted and their recommendations followed.

up to 240 mins

FP302
Intustrap

Nullifire
Smart Protection

- When using FR230, if the service type requires thermal expansion, FP302 should be the full depth of the FR230 primary seal if an alternative thermal accommodation joint has not been used.
- The product is tested with or without the release tape in position, so it can be used with or without the tape present.

Storage
Store in dry conditions between -10°C and +70°C. Do not stack on each other without separation.

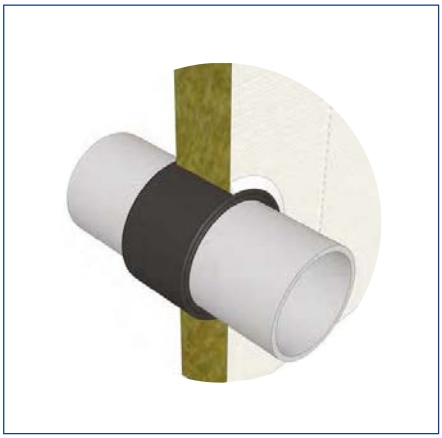
Shelf Life
Unlimited when stored as recommended.

Health & Safety Precautions
Safety data sheet must be read and understood before use.

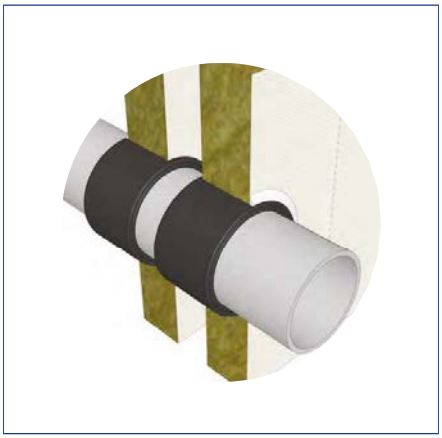
Technical Service
Tremco CPG UK Limited has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on +44 (0)1322 551010.

Guarantee / Warranty
Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge.
No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.
Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

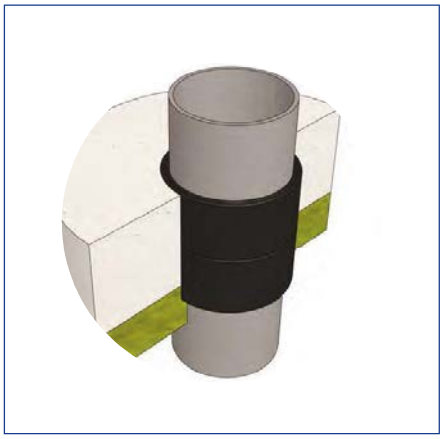
Typical Details



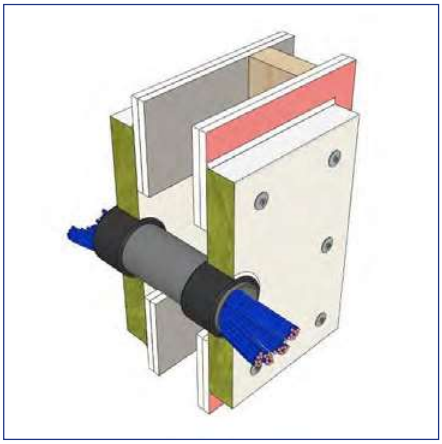
FP302 Intustrap within single FB750 Intubatt – Up to EI60



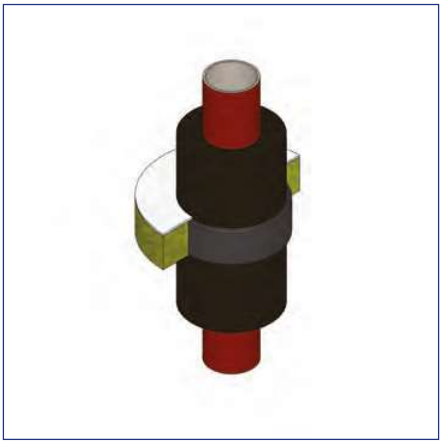
FP302 Intustrap within double FB750 Intubatt – Up to EI120



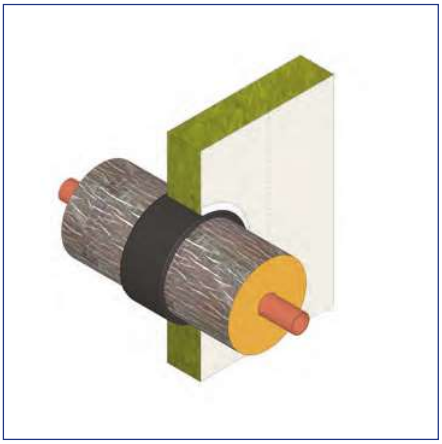
FP302 Intustrap within FR230 Intucompound, accommodating pipe thermal expansion requirements – Up to EI240



FP302 Intustrap within pattress FB750 Intubatt for combustible conduits filled with any volume of cables – Up to EI120



FP302 Intustrap within FI064 Backer + FS702 Intumastic around insulated non-combustible pipe – Up to EI120



FP302 Intustrap within FB750 Intubatt around insulated non-combustible pipe – Up to EI120

up to 240 mins

FP302
Intustrap

Nullifire Smart Protection

Application Requirement

		Number of FP302 layers (times around pipe)	Number of FP302 rows						
			Use within single FB750	Use within double FB750	Use with 100 mm FR230 up to 2 hours	Use with 100 mm FR230 up to 4 hours	Use with FI064 + FS702 up to 2 hours	Rigid walls up to 100 mm	Rigid walls above 100 mm
WALLS									
Combustible Pipe Diameter	Up to 55 mm	1	1	2	2	2	2	1	2
	Up to 82 mm	2	1	2	2	2	2	1	2
	Up to 125 mm	3	1	2	2	2	2	1	2
	Up to 160 mm	4	NA	NA	2	2	NA	1	2
Pipe insulation	Rock Fibre	2	1	2	2	2	2	1	2
	Glass Fibre	2	1	2	2	2	2	1	2
	PIR	2	1	2	2	2	2	1	2
	Phenolic	2	1	2	2	2	2	1	2
	Rubberoid	2	1	2	2	2	2	1	2
Conduits	Up to 55 mm	1	1	2	2	2	2	1	2
	Up to 82 mm	2	1	2	2	2	2	1	2

Pipe Diameter		Number of FP302 layers (times around pipe)	Number of FP302 rows						
			Use within single FB750	Use within double FB750	Use with 100 mm FR230 up to 2 hours	Use with 100 mm FR230 up to 4 hours	Use with FI064 + FS702 up to 2 hours	Rigid floors up to 2 hours	Rigid floors up to 4 hours
FLOORS									
Combustible Pipe Diameter	Up to 55 mm	1	NA	1	1	2	1	1	2
	Up to 82 mm	2	NA	1	1	2	1	1	2
	Up to 125 mm	3	NA	1	1	2	1	1	2
	Up to 160 mm	4	NA	1	1	2	1	1	2
Pipe insulation	Rock Fibre	2	NA	1	1	2	1	1	2
	Glass Fibre	2	NA	1	1	2	1	1	2
	PIR	2	NA	1	1	2	1	1	2
	Phenolic	2	NA	1	1	2	1	1	2
	Rubberoid	2	NA	1	1	2	1	1	2
Conduits	Up to 55 mm	1	NA	1	1	2	1	1	2
	Up to 82 mm	2	NA	1	1	2	1	1	2

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2021-01

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.01.2017 Version number 2 Revision: 17.10.2016

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: Nullifire FP302**

· **MSDS code:** W-N-FP302
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Fire retarding agent

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
tremco illbruck Ltd
Coupland Road, Hindley Green, WIGAN, WN2 4HT
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410
msds@tremco-illbruck.com

· **Further information obtainable from:**
tremco illbruck Ltd
Torrington Avenue, Coventry, CV4 9TJ
T: +44 (0) 2476855000, F: +44 (0) 2476469547
www.nullifire.com, protect@nullifire.com
· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 2476855000. At all other times please contact your national poisoning centre.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Not applicable.
The product is not classified according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:**
Graphite impregnated EPDM polymer sheet assembly.
Article of substances listed below with non-hazardous additions.

· **Dangerous components:** Void

(Contd. on page 2)

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(Contd. of page 1)

· **Additional information:**
This product is an "article" as defined under the REACH Regulation (EC) 1907/2006 Title I, Chapter 2, Article 3.
Out of scope for safety data sheet requirements under the REACH Regulation (EC) 1907/2006 Title IV, Article 31.
For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Not applicable.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Do not breathe fume.
May cause respiratory irritation.
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide (CO)
Carbon dioxide
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective clothing.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Nullifire Smart Protection

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Trade name: Nullifire FP302

(Contd. of page 2)

Dispose contaminated material as waste according to item 13.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Avoid contact with the eyes and skin.
Wear suitable protective clothing and gloves.
· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:** Store away from water.
· **Further information about storage conditions**:
Store in dry conditions.
Protect from humidity and water.
Storage temperature: +5 °C to +35 °C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Avoid contact with the eyes and skin.
Wear suitable protective clothing and gloves.
Wash hands before breaks and at the end of work.
· **Respiratory protection:** Not required.
· **Protection of hands:**
Recommendation:

Protective gloves

· **Material of gloves** Rubber gloves
· **Penetration time of glove material** Not applicable.
· **Eye protection:** Safety glasses
· **Body protection:** Light weight protective clothing

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Nullifire Smart Protection

Printing date 27.01.2017 Version number 2 Revision: 17.10.2016

Trade name: Nullifire FP302

(Contd. of page 3)

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solid material
Colour:	Black
· **Odour:**	Odourless
· **Melting point/freezing point:**	Undetermined.
· **Flash point:**	Not applicable.
· **Ignition temperature:**	
Decomposition temperature:	> 200 °C
· **Explosive properties:**	Product does not present an explosion hazard.
· **Density at 20 °C:**	1.26 g/cm³
· **Solubility in / Miscibility with water:**	Insoluble.
· **Solvent content:**	
Solids content:	100 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Possible in traces.
Carbon monoxide and carbon dioxide
Nitrogen oxides

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Slight irritation possible.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Subacute to chronic toxicity:** Not applicable.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.01.2017 Version number 2 Revision: 17.10.2016

Trade name: Nullifire FP302

(Contd. of page 4)

· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** Not easily biodegradable
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Avoid transfer into the environment.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** Disposal must be made according to official regulations.

· **European waste catalogue**	
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03

· **Uncleaned packaging:**
· **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.01.2017 Version number 2 Revision: 17.10.2016

Trade name: Nullifire FP302

(Contd. of page 5)

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

*

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials, Annex II:**
No further relevant information available.

· **Information about limitation of use:** No further relevant information available.

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**

Protective & Marine Coatings

FIRETEX® FX5062
WATER BASED INTUMESCENT

Revised 01/2016 Issue 3

PRODUCT INFORMATION

PRODUCT DESCRIPTION

A water based TCEP free thin film intumescent coating

RECOMMENDED USE

FIRETEX FX5062 is designed for application by airless spray to provide fire resistance for periods of up to 90 minutes on structural steel.

For use in internal dry controlled environments without topcoat
(C1 according to ISO12944-2:1998)
and internal semi controlled environments with topcoat (C2 according to ISO12944-2:1998)

ENDORSEMENTS

Certifire Approved – Certificate CF5267

This product has been tested and assessed in accordance with the ASFP "Yellow Book" 5th Edition.

RECOMMENDED APPLICATION METHODS

Airless Spray

Brush

Recommended Thinner: Water – Thinning will have an adverse effect on sag tolerance.

PRODUCT CHARACTERISTICS

% Solids by Volume: 69 ± 3% (ASTM-D2697-91)

Colour Availability: White

VOC
35 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
25 gms/kilo content by weight from formulation, to satisfy EC Solvent Emissions Directive

PRACTICAL APPLICATION RATES - MICRONS PER COAT

	Airless Spray	Brush
Dry	690*	300
Wet	1000	441

* Maximum sag tolerance typically 1500µm wet (1035µm dry) by airless spray.

AVERAGE DRYING TIMES

	@ 15°C	@ 23°C
To touch:	3 hours	1½ hours
To recoat:	6 hours	4 hours
To handle:	This will depend on the total thickness of FIRETEX FX5062 to be applied.	

These figures are given as a guide only. Factors such as air movement and humidity must also be considered.

RECOMMENDED PRIMERS

A range of primers have been fire tested and approved for use under FIRETEX FX5062.

Please consult Sherwin-Williams for detailed information. **Must not be applied directly to galvanized steel and zinc rich primers.**

RECOMMENDED TOPCOATS

If it can be guaranteed that application and subsequent in-service conditions will be in a C1 environment as defined in ISO 12944-2:2007, then no topcoat is required.

For any other situation a topcoat must be applied, consult Sherwin-Williams Customer Service Department for advice.

Sher-Cryl M770

FIRETEX M71V2,

Acrolon C137V2 or Acrolon C237

The above products should be used for subsequent re-decoration.

PACKAGE

A single component material

Pack Size:	20 litre units
Weight:	1.38 kg/litre
Shelf Life:	6 months from date of manufacture or 'Use By' date where specified. Protect from frost.

Protective & Marine Coatings

FIRETEX® FX5062
WATER BASED INTUMESCENT

Revised 01/2016 Issue 3

PRODUCT INFORMATION

ADDITIONAL NOTES

In common with other water based coatings, the drying of this material is retarded by high humidity conditions. Lack of air movement also slows down the drying process, and under such conditions it is advisable to introduce some method of circulating air over the coated surface in order to speed up the drying. A ventilated air speed of 2 metres per second is recommended.

Numerical values quoted for physical data may vary slightly from batch to batch.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from all surface contamination.

APPLICATION EQUIPMENT

Airless Spray

Nozzle Size:	17 - 21 thou depending on application requirements
Operating Pressure:	175kg/cm² (2500 psi)

Petrol Unit:

Nozzle Size:	17 - 21 thou depending on application requirements
Operating Pressure:	175kg/cm² (2500 psi)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent with satisfactory atomisation. As conditions will vary from job to job, it is the applicator's responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt Sherwin-Williams should be consulted.

Use 3/8" ID fluid line where lengths in excess of 10 feet are required. In-line gun or pump filters should not normally be used.

Brush

The material is suitable for brush application but due to the nature of the material a ribbed appearance will result.

Application of more than one coat may be necessary to give equivalent dry film thickness to a single applied coat.

APPLICATION CONDITIONS AND OVERCOATING

FIRETEX FX5062 must be applied in a dry internal environment. It must not be exposed to condensation, damp or wet conditions during or after application.

In conditions of high relative humidity good ventilation conditions are essential. Substrate temperature shall be at least 3°C above the dew point and always above 0°C.

At application temperatures below 10°C, drying and curing times will be significantly extended, and spraying characteristics may be impaired.

A minimum ambient air temperature of 5°C is required to ensure proper film formation.
Relative humidity should not exceed 80% to ensure proper film formation.

Extended overcoating times may be required at low temperatures and/or high film thicknesses.

Occasionally impaired film formation such as cracking may occur on edges of flanges and external or internal angles of structural steel, depending on geometry, over-application and ambient conditions. This does not detrimentally affect the fire performance properties of the product.
If it is desired to overcoat outside the times stated on the data sheet, please seek advice of Sherwin-Williams.

HEALTH AND SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.
Unlike many other water based intumescent coatings, FIRETEX FX5062 does not contain tris-chloro ethyl phosphate (TCEP). TCEP is a category 3 carcinogen, which would cause products to be classified as harmful. Since FIRETEX FX5062 is TCEP free, it is not classified as harmful by the Chemicals (Hazard) Information and Packaging for Supply Regulations 2002.

WARRANTY

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Sherwin-Williams can accept no liability for the performance of the product, or for any loss or damage arising out of such use.

The information detailed in this Data Sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Sherwin-Williams, quoting the reference number, to ensure that they possess the latest issue.

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : FIRETEX FX5062 Water Based Intumescent

Product code : FX5062

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Paint or paint related material.

: Industrial use only.

1.3 Details of the supplier of the safety data sheet

Sherwin-Williams Protective & Marine
Tower Works
Kestor Street
Bolton
BL2 2AL
United Kingdom
+44 (0) 1204 521771

e-mail address of person responsible for this SDS : hse.pm.emea@sherwin.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : 0844 892 0111

Supplier

Telephone number : +(44)-870-8200 418

Hours of operation : Emergency contact available 24 hours a day

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

SECTION 2: Hazards identification

Supplemental label elements : Safety data sheet available on request. FOR INDUSTRIAL USE ONLY

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixture :

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Chloropropanol Phosphate	EC: 237-158-7 CAS: 13674-84-5	≤3	Acute Tox. 4, H302	[1]
Propylene Glycol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≤3	Not classified. **See Section 16 for the full text of the H statements declared above.**	[2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye contact : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

SECTION 4: First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, carbon dioxide, powders.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

Keep unnecessary and unprotected personnel from entering.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

SECTION 6: Accidental release measures

6.3 Methods and material for containment and cleaning up : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling : Avoid contact with skin and eyes. Avoid inhalation of vapour, spray or mist.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations.
Notes on joint storage
Keep away from: oxidising agents, strong alkalis, strong acids.
Additional information on storage conditions
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.
Keep container tightly closed.
No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Contaminated absorbent material may pose the same hazard as the spilt product.

Store in closed original container at temperatures between 5°C and 25°C.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values

SECTION 8: Exposure controls/personal protection

Propylene Glycol	**EH40/2005 WELs (United Kingdom (UK), 12/2011).** TWA: 10 mg/m³ 8 hours. Form: Particulate TWA: 474 mg/m³ 8 hours. Form: Sum of vapour and particulates TWA: 150 ppm 8 hours. Form: Sum of vapour and particulates

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

: Regular monitoring of all work areas should be carried out at all times, including areas that may not be equally ventilated.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

: Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection : Wear suitable gloves tested to EN374.

Gloves : Short Term Exposure less than 10 minutes Continuous use Nitrile gloves.

Long Term Exposure Spill / For prolonged or repeated handling, use PE / PE Laminate gloves > 8 hours (breakthrough time) .

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.
The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
Barrier creams may help to protect the exposed areas of the skin but should not be

SECTION 8: Exposure controls/personal protection

applied once exposure has occurred.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Recommended: A2P2 (EN14387). Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Do not allow to enter drains or watercourses.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.
Colour	: White.
Odour	: Paint
Odour threshold	: Not Available (Not Tested).
pH	: 8.5
Melting point/freezing point	Not Available (Not Tested).
Initial boiling point and boiling range	: 100°C
Flash point	: Closed cup: >93.3°C
Evaporation rate	: 0.09 (butyl acetate = 1)
Flammability (solid, gas)	: Not Available (Not Tested).
Burning time	Not Available (Not Tested).
Burning rate	Not Available (Not Tested).
Upper/lower flammability or explosive limits	: Lower: 0.6% Upper: 12.5%
Vapour pressure	: 0.31 kPa [at 20°C]
Vapour density	: 1 [Air = 1]
Relative density	: 1.35
Solubility(ies)	Not Available (Not Tested).
Solubility in water	: Not Available (Not Tested).
Partition coefficient: n-octanol/ water	Not Available (Not Tested).
Auto-ignition temperature	: Not Available (Not Tested).
Decomposition temperature	Not Available (Not Tested).

SECTION 9: Physical and chemical properties

Viscosity : Kinematic (room temperature): >0.205 cm^2/s
Kinematic (40°C): >0.205 cm^2/s

Explosive properties

Oxidising properties : Under normal conditions of storage and use, hazardous reactions will not occur.

9.2 Other information

Heat of combustion : 5.338 kJ/g

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Chloropropanol Phosphate	LD50 Oral	Rat	1500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	51932.1 mg/kg

Irritation/Corrosion

No data available

Conclusion/Summary : Not available.

Sensitisation

No data available

Conclusion/Summary : Not available.

Mutagenicity

SECTION 11: Toxicological information

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
No data available			

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
No data available			

Aspiration hazard

Product/ingredient name	Result
No data available	

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
No data available				

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
No data available			

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Chloropropanol Phosphate	-	0.8 to 2.8	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

SECTION 12: Ecological information

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : No.

European waste catalogue (EWC) : 08 01 12 - waste paint and varnish other than those mentioned in 08 01 11

Disposal considerations : Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.
For further information, contact your local waste authority.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

European waste catalogue (EWC) : Plastic articles 15 01 02 - metallic packaging 15 01 04 - mixed packaging 15 01 06.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport Hazard Class(es)/ Label(s)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

SECTION 14: Transport information

Additional information	**Special provisions** Not Applicable	-	-

This mixture is not classified as dangerous according to international transport regulations (ADR/RID, IMDG, ICAO/IATA).

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not applicable.

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC content ***(2010/75/EU)*** : 1.2 **w/w**
17 **g/l**

Priority List Chemicals (793/93/EEC) : Not determined

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

SECTION 16: Other information

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Key literature references and sources for data : Regulation (EC) No. 1272/2008 [CLP]
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
DPD = Dangerous Preparations Directive [1999/45/EC]
DSD = Dangerous Substances Directive [67/548/EEC]
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830
Directive 96/82/EC, and relative amendments & additions
Directive 2008/98/EC, and relative amendments & additions
Directive 2000/39/EC, and relative amendments & additions
CEPE Guidelines

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements : H302 Harmful if swallowed.

Full text of classifications [CLP/GHS] : Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4

Date of printing : 08, Jun, 2016.

Date of issue/ Date of revision : 08, Jun, 2016.

Date of previous issue : 29, May, 2016.

: If there is no previous validation date please contact your supplier for more information.

Version : 4

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SECTION 16: Other information

Protective & Marine Coatings

FIRETEX® FX5090
WATER BASED INTUMESCENT

Revised 05/2016 Issue 7

PRODUCT INFORMATION

PRODUCT DESCRIPTION

A water based TCEP free thin film intumescent coating

RECOMMENDED USE

FIRETEX FX5090 is designed for application by airless spray to provide fire resistance for periods of up to 120 minutes on structural steel.

For use in internal dry controlled environments without topcoat. (C1 according to ISO12944-2:1998) and external urban or uncontrolled internal environments with topcoat (C3 according to ISO12944-2:1998).

ENDORSEMENTS

Certifire Approved – Certificate CF5188
This product has been assessed in accordance with the Criteria of Acceptability given in the ASFP/BCF "Industry Guidance document".

This product has been tested and assessed in accordance with the ASFP fire testing protocol for cellular beam protection. See Section 6.3 from ASFP "Yellow Book" 4th Edition.

Tested and assessed to EN13381-8.
European Technical Assessment ETA-15-0486.
CE Mark Number: 1121-CPR-GA5024.

RECOMMENDED APPLICATION METHODS

Airless Spray
Brush

Recommended Thinner: Water - See Additional Notes

PRODUCT CHARACTERISTICS

% Solids by Volume: 69 ± 3% (ASTM-D2697-91)

Colour Availability: White

VOC
0.19 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
0.13 gms/kilo content by weight from formulation, to satisfy EC Solvent Emissions Directive

RECOMMENDED THICKNESS

See separate sheet of FX5090 loading requirements.

PRACTICAL APPLICATION RATES - MICRONS PER COAT

	Airless Spray	Brush
Dry	1000*	300
Wet	1450	435

* Maximum sag tolerance typically 1800µm wet (1242µm dry) by airless spray.

AVERAGE DRYING TIMES

	@ 15°C	@ 23°C
To touch:	3 hours	1½ hours
To recoat:	6 hours	4 hours
To handle:	This will depend on the total thickness of FIRETEX FX5090 to be applied.	

No more than two coats by airless spray should be applied within any 24 hour period

These figures are given as a guide only. Factors such as air movement and humidity must also be considered.

RECOMMENDED PRIMERS

A range of primers have been fire tested and approved for use under FIRETEX FX5090.
Please consult Sherwin-Williams for detailed information.
Must not be applied directly to galvanized steel and zinc rich primers.

RECOMMENDED TOPCOATS

If it can be guaranteed that application and subsequent in-service conditions will be in a C1 environment as defined in ISO 12944-2:1998, then no topcoat is required.

For any other situation a topcoat must be applied, consult Sherwin-Williams for advice.

Sher-Cryl M770
FIRETEX M71V2,
Acrolon C137V2 or Acrolon C237
The above products should be used for subsequent re-decoration.

PACKAGE

A single component material

Pack Size:	20 litre units
Weight:	1.40 kg/litre
Shelf Life:	6 months from date of manufacture or 'Use By' date where specified. Protect from frost.

Protective & Marine Coatings

FIRETEX® FX5090
WATER BASED INTUMESCENT

Revised 05/2016 Issue 7

PRODUCT INFORMATION

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from all surface contamination.

APPLICATION EQUIPMENT

Airless Spray

Nozzle Size:	19 - 21 thou depending on application requirements
Operating Pressure:	175kg/cm² (2500 psi)

Petrol Unit:

Nozzle Size:	19 - 21 thou depending on application requirements
Operating Pressure:	175kg/cm² (2500 psi)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent with satisfactory atomisation. As conditions will vary from job to job, it is the applicator's responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt Sherwin-Williams should be consulted.

Use 3/8" ID fluid line where lengths in excess of 10 feet are required. In-line gun or pump filters should not normally be used. Brush

The material is suitable for brush application but due to the nature of the material a ribbed appearance will result. Application of more than one coat may be necessary to give equivalent dry film thickness to a single applied coat.

APPLICATION CONDITIONS AND OVERCOATING

FIRETEX FX5090 must be applied in a dry internal environment. It must not be exposed to condensation, damp or wet conditions during or after application.

In conditions of high relative humidity good ventilation conditions are essential. Substrate temperature shall be at least 3°C above the dew point and always above 0°C.

At application temperatures below 10°C, drying and curing times will be significantly extended, and spraying characteristics may be impaired.

A minimum ambient air temperature of 5°C is required to ensure proper film formation.

Relative humidity should not exceed 80% to ensure proper film formation.

Extended overcoating times may be required at low temperatures and/or high film thicknesses.

Occasionally impaired film formation such as cracking may occur on edges of flanges and external or internal angles of structural steel, depending on geometry, over-application and ambient conditions. This does not detrimentally affect the fire performance properties of the product.

If it is desired to overcoat outside the times stated on the data sheet, please seek advice of Sherwin-Williams.

ADDITIONAL NOTES

In common with other water based coatings, the drying of this material is retarded by high humidity conditions. Lack of air movement also slows down the drying process, and under such conditions it is advisable to introduce some method of circulating air over the coated surface in order to speed up the drying. A ventilated air speed of 2 metres per second is recommended.

Numerical values quoted for physical data may vary slightly from batch to batch.

HEALTH AND SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

Unlike many other water based intumescent coatings, FIRETEX FX5090 does not contain tris-chloro ethyl phosphate (TCEP).

TCEP is a category 3 carcinogen, which would cause products to be classified as harmful. Since FIRETEX FX5090 is TCEP free, it is not classified as harmful by the Chemicals (Hazard) Information and Packaging for Supply Regulations 2002.

WARRANTY

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Sherwin-Williams can accept no liability for the performance of the product, or for any loss or damage arising out of such use.

The information detailed in this Data Sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Sherwin-Williams, quoting the reference number, to ensure that they possess the latest issue.

SAFETY DATA SHEET

FX5090

Section 1. Identification

Product name : FIRETEX FX5090 Water Based Intumescent Coating
White

Product code : FX5090

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

Emergency telephone number of the company : US / Canada: (216) 566-2917
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

Product Information Telephone Number : US / Canada: (800) 524-5979
Mexico: Not Available

Regulatory Information Telephone Number : US / Canada: (216) 566-2902
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (800) 424-9300
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 9.9%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 12.7%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 12.7%

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of causing cancer.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

WARNING: This product contains a chemical known to the State of California to cause cancer. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≤10	13463-67-7
Pentaerythritol	≤10	115-77-5
1,3,5-Triazine-2,4,6-triamine	≤10	108-78-1
Chloropropanol Phosphate	≤3	13674-84-5
Propylene Glycol	≤3	57-55-6
Silicate Fibers	≤3	287922-11-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2017).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Pentaerythritol	**ACGIH TLV (United States, 3/2017).** TWA: 10 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Respirable

Section 8. Exposure controls/personal protection

	fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
1,3,5-Triazine-2,4,6-triamine	**AIHA WEEL (United States, 10/2011).** TWA: 10 mg/m³ 8 hours. Form: Inhalable TWA: 5 mg/m³ 8 hours. Form: Respirable
Chloropropanol Phosphate	None.
Propylene Glycol	**AIHA WEEL (United States, 10/2011).** TWA: 10 mg/m³ 8 hours.
Silicate Fibers	**ACGIH TLV (United States, 3/2017).** TWA: 1 mg/m³ 8 hours. Form: Respirable fraction

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
None.	

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
None.	

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 8

Melting point/freezing point : Not available.

Boiling point/boiling range : 100°C (212°F)

Flash point : Closed cup: 94°C (201.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 2.6%
Upper: 12.5%

Vapor pressure : 2.3 kPa (17.5 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.42

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 0.445 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Pentaerythritol	LD50 Oral	Rat	18500 mg/kg	-
1,3,5-Triazine-2,4,6-triamine	LD50 Oral	Rat	3161 mg/kg	-
Chloropropanol Phosphate	LD50 Oral	Rat	1500 mg/kg	-
Propylene Glycol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-

Section 11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
1,3,5-Triazine-2,4,6-triamine	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Propylene Glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Child	-	96 hours 30 Percent continuous	-
	Skin - Mild irritant	Human	-	168 hours 500 milligrams	-
	Skin - Moderate irritant	Human	-	72 hours 104 milligrams Intermittent	-
	Skin - Mild irritant	Woman	-	96 hours 30 Percent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
1,3,5-Triazine-2,4,6-triamine	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	20985.4 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Pentaerythritol	Acute EC50 33600000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
Propylene Glycol	Acute EC50 >110 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1020000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 710000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Propylene Glycol	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Pentaerythritol	-	1.26	low
1,3,5-Triazine-2,4,6-triamine	-	<3.8	low
Chloropropanol Phosphate	-	0.8 to 2.8	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 14. Transport information

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

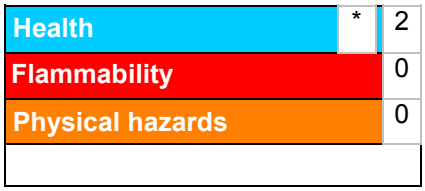
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
CARCINOGENICITY - Category 2	Calculation method

History

Date of printing : 6/21/2018

Date of issue/Date of revision : 6/21/2018

Date of previous issue : 3/22/2018

Version : 10

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use

Section 16. Other information

of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

UltraLite 60:15

TECHNICAL DATASHEET

Introduction:

UltraLite 60:15 is an **IFC Certified** ultra lightweight symmetrical fire rated cavity barrier designed to provide compartmentation in roof cavities and concealed spaces for both vertical and horizontal applications.

UltraLite 60:15 is simple to fit and requires no specialist tools or fittings.

Physical Properties:

Description:	Lightweight / Health Safe / User friendly / flexible / durable / Easy to shape and cut
Colour:	White
Proprietary Treatment:	Food safe and non-corrosive.
Thickness:	6.5 mm
Weight:	1334 g/m² -
Fibre Diameter	> 6 micron, (classified non-respirable)

Certification Body: **IFC** Certification Reference # **1336**

Testing Authority: **Warringtonfire**

Test Specification:

Test Classification:	**BS 476: parts 20/22**	**60 minutes integrity** **15 minutes insulation**
Test Report:	**376403** [Vertical] **419257** [Horizontal]	Review date: Jan 2022 Review date: Nov 2024

Packing Specification and Pack Dimensions:

Width:	130cm	Packaging:	Convoluted and individually wrapped in polythene.
Roll Length:	6m		
Roll Area:	7.8m²		Packed in strong boxes.
Pack Weight:	10.4kgs		.
Quantity per box:	10 packs		
Quantity per pallet:	2 boxes (20 packs)		

Firehalt®

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MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

FireHalt Ultralite 60:15 Fire Barrier

Emergency Contact No. : 0044 (0)161 308 5500

2. HAZARD IDENTIFICATION

Appearance and odour: odourless white treatment on both sides Because the fabric is treated both sides the following risks are significantly reduced. However, they are included for completeness, and are most applicable when the fabric is being cut to shape.
Eye contact: Dusts and fibres from the cut fabric may cause mechanical irritation
Skin contact: Glass fibres may cause itching and short term mechanical irritation
Ingestion: May cause mechanical irritation from the glass fibres
Inhalation; Glass fibres may cause irritation of the nose, throat, and respiratory tract. Avoid inhaling fine dust particles or fumes.
Medical conditions aggravated by exposure; Respiratory and skin conditions that are aggravated by mechanical irritants may be at an increased risk for worsening from exposure to this product.

3. COMPOSITION

Treated Aluminium borosilicate 'E' glass fabric. Organic treatment on both sides of facing fabrics.

4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If symptoms persist, seek medical attention.
Ingestion : Ingestion is unlikely. However, if it does occur watch the person for several days to make sure that intestinal blockage does not occur.
Eye contact : Flush copiously with water for 15 min. Do not rub or scratch eyes. Rubbing or scratching may cause mechanical damage. If irritation persists seek medical attention.
Skin contact : Wash immediately with soap and water. Use a washcloth to help remove fibres. To avoid further irritation, do not rub or scratch affected areas. Rubbing or scratching may force fibres into the skin. If irritation persists, seek medical attention.

5. FIRE FIGHTING MEASURES

Classification: Glass fibre is non-flammable.
Extinguishing media: Dry chemical, foam, carbon dioxide, water
Unusual fire and explosion habits; None known
Fire fighting instructions: No special procedures necessary. Use general fire fighting procedures for packaging materials. Use self-contained breathing apparatus and fire fighting protective gear in a sustained fire.
Hazardous combustion products; In a sustained fire situation the coating will burn to form carbon monoxide, carbon dioxide, hydrocarbons, nitrogen and halogen based gases. Other undetermined compounds could be released in small quantities.

6. ACCIDENTAL RELEASE MEASURES

Releases of this product to the land, water, and air may require reporting to the local authorities. Refer to local and applicable national regulations.
Land-spill: Scoop up material and put into a suitable container for disposal as a non-hazardous waste.
Water spill: This material will sink and disperse along the bottom of waterways and ponds. It can not easily be removed after it is waterborne; however, the material is non-hazardous in water.
Air release: This material will settle out of the air. If concentrated on land it can then be scooped up for disposal as a non-hazardous waste.

7.HANDLING AND STORAGE

Storage temperature; < 120 C
Storage pressure: N/A
Handling and storage procedures: No special procedures are required for this material

8. EXPOSURE CONTROL-PERSONAL PROTECTION

Exposure guidelines: As particulate (UK)
Inhalable dust: (8 hr TWA) 5mg/m3. Total dust 10 mg/m3
For MMVF, (8hr TWA) values in Fibres / ml
UK and Ireland 2, Italy, Spain 1, Austria and Switzerland 0.5, Germany 0.25, Belgium and Portugal 0.
Please refer to local legislation for exposure limits in other countries.
Other guidelines;
Fibrous glass (fibreglass continuous filament) (65997-17-3)
ACGIH: Inhalable fraction: (5) mg/m3 TWA (related to fibrous glass)
Respirable fraction: (1) fibre/ ml (related to respirable particulate with fibre-like dimensions-glass shards)
The TLV-Time Weighted Average -for respirable continuous filament glass fibres are non-respirable. Continuous filament glass products that are chopped, crushed or severely mechanically processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards.
Ventilation: Ventilation should effectively remove and prevent build-up of dust generated from the handling of this product. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Personal Protective Equipment to be worn whenever the fabric is being cut

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MATERIAL SAFETY DATA SHEET

	to expose loose glass fibre filaments, otherwise the effects are significantly reduced because the fabric is coated both sides. Respiratory protection; Use particulate filter respirator such as FFF1/P1 or FFF2/P2 for particulate concentrations exceeding the OEL Skin protection: Normal work clothing (long sleeved shirts and long pants) is recommended. Use impervious gloves. Skin irritation is known to occur at the pressure points such as around the neck, wrists, waist and between the fingers. Eyes/Face protective equipment: Wear safety glasses, goggles, or face shield. Work practises: Use good hygiene practises in handling. Remove material from the skin and eyes after contact. Remove material from clothing using vacuum –never compressed air. Always wash work clothes separately from other clothing. Wipe out the washer or sink to prevent loose glass fibres from getting on other clothing. Keep work areas clean from dusts and fibres released during processing or fabrication. Use vacuum to clean up product. Avoid dry sweeping or using compressed air as these techniques re-suspend dusts and fibres into the air. Eye wash fountain and emergency showers are recommended. The product may contain traces of retained toluene, the maximum level for airborne concentration is 100 PPM
9. PHYSICAL AND CHEMICAL PROPERTIES	**10. STABILITY AND REACTIVITY**
Appearance: White facing fabrics with multiple layers of aluminium foils and a glass fibre needlemat core. Odour: None from fully cured product Softening point: Glass fibre 830-870° C Liquid Temperature 1065C Boiling point: N/A Freezing point: N/A Evaporation point;: N/A Viscosity: N/A Vapour pressure: N/A pH.: N/A Solubility in water: Insoluble Specific gravity: 2.60	This is a stable material Conditions to avoid; None expected Incompatible materials: None expected Hazardous decomposition products: Primary combustion products are carbon monoxide, carbon dioxide and water. Other undetermined products could be released in small quantities Hazardous polymerisation: Will not occur
11. TOXICOLOGY INFORMATION	**12. ECOLOGICAL INFORMATION**
Acute toxicity; glass fibre dusts may cause mechanical irritation to the eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. High exposures may cause difficulty in breathing, congestion, and chest tightness. Chronic toxicity: No known effects connected to long term use or contact . Carcinogenicity; Fibreglass continuous filament: **Classified as non-carcinogenic**. The International Agency for Research on Cancer (**IARC**) categorised fibreglass continuous filament as **non-classifiable** with respect to human carcinogenicity (**Group 3**). The evidence from human as well as well as animal studies was evaluated by IARC as insufficient to classify fibreglass continuous filament as a possible, probable, or confirmed cancer causing material. The American Conference of Governmental Industrial Hygienists (ACGIH) established an A4 classification- not classifiable as a human carcinogen for respirable continuous filament glass fibres (based on 65997-17-3)	No environmental detrimental effects known. This material is not expected to harm animals, plants or fish. **ODP Values.** No ozone depleting substances (CFCs, HCFCs, HBFCs, and halons or their substitutes HFCs, HCs, and PFCs) have been identified in the finished product or associated with the specific manufacturing process.
13. DISPOSAL CONSIDERATIONS	**14. TRANSPORT INFORMATION**
Consult local authorities before disposing of waste material. Dispose, recycle or re-use waste material according to local and national requirements.	There are no special transport requirements.
15. REGULATORY INFORMATION	**16. OTHER INFORMATION**
Government regulations; Not classified as a dangerous substance under EU directive 88/379/EEC EEC Labelling: Not required to be labelled under directives 88/379EEC, 67/548/EEC, annex 1, and 97/69/EC.	The information given is based on our present knowledge. New information will be given if and when it becomes available. This Safety Data sheet conforms to EU directive 91/155/EEC, as amended 93/112/EC

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MATERIAL SAFETY DATA SHEET

TRIMO

TECHNICAL INSTRUCTIONS FOR THE USE AND MAINTENANCE OF TRIMO PRODUCTS

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1 Introduction

The instructions are intended for the **inspection and maintenance** of Trimoterm, Trimoval panels, Qbiss One elements and flashing elements made of galvanised pre-painted sheet metal, protected with the coil coating organic protective coatings. These coatings provide long-term resistance and stability and aesthetic appearance of individual elements and the final facility.

On a regular basis a caretaker or user of facilities and persons with adequate professional qualifications shall **inspect, maintain and organise cleaning** of all structural elements of the facility in scope of regular maintenance works. An inspection carried out **minimally once a year** is obligatory; it may be carried out even several times if the environment is less favourable. Conclusion of a maintenance contract with the contractor is recommended.

The table at the end of this document presents a list of required procedures and measures that are to be implemented during the annual inspection of the facility, instructions for damage repairs, washing of roof and façade panels and other aspects of maintenance.

In case of questions about the inspection and maintenance of hot galvanised pre-painted sheet metal, cladding, roof and façade Trimoterm panels, you are kindly requested to contact the Trimo service and repair department.

2 Protection of Trimo elements

Trimo elements viz. panels consist of a filling (mineral wool) and cladding made of galvanised pre-painted thin sheet metal.

Steel sheet metal is preliminary hot galvanised (usually 275 g/m^2) in compliance with EN 10346, and additionally protected by organic coating in accordance with the »coil-coating« process (DIN EN 10169/1).

The following basic types of organic coatings viz. protection are applied to steel sheet metal:
- based on SP polyester
- based on PVDF polyvinylidene fluoride
- based on PUR polyurethane
- based on PVC polyvinyl chloride, coating or film

Individual types of organic protection with the basic characteristics are presented in Table 1.

Table 1: Basic characteristics of an individual type of organic coating or protection

TYPE OF CORROSION PROTECTION	SP	SP	PVDF	PVDF+	PUR	PVC(P)	PVC+F
Corrosion classification [EN ISO 12944-2]	II	III	III	III	III	III	III
Total organic thickness (my) [EN 13523-1]	15	25	25	35	50	175-200	120-200
Temperture resistance (°C)	70	80	110	110	110	70	70
UV resistance category [EN 10169 / Table 8]	—	Ruv3	Ruv4	Ruv4	Ruv4	Ruv2	—
Flexibility	••	••	•••	••••	••••	••••	••••
Stain resistance	••	•••	••••	••••	••••	••	••••

Legend:
•••• suitable without reservations ••• very suitable •• suitable • conditionally useful /contact Trimo - not useful

Note: There should be no sudden cooling to the dew point during cleaning. Otherwise condensate can appear. See Table: Presentation of dew point at a certain temperature of the room and relative humidity. In case of cooling the working temperature should be min. 3°C above the dew point.

2.1 Instructions for prevention of damage to products

The instructions for handling of panels and elements are to be followed in order to be able to prevent mechanical damage.

Only scissors and saws that do not heat the cutting spot to a high temperature are allowed for additional cutting of panels or elements. High temperature causes destruction of anti-corrosion protection in the immediate vicinity of the cut. Therefore the use of angle grinders is strictly prohibited for this purpose!

A protective element (e.g. cardboard) is to be inserted between a drilling machine and a façade panel during drilling and riveting of the edges and flashing in order to prevent any additional mechanical damage to a panel and falling of chips on a pre-painted thin sheet metal.

Work producing hot filings (i.e. welding, cutting) is strictly forbidden in the vicinity of panels. Panels have to be adequately temporarily protected if any additional works are carried out in the immediate vicinity (i.e. concreting, plastering, asphalting etc.).

Marking or scratching by wire nails or similar sharp objects is prohibited since it may damage the protective layer.

3 Regular annual inspection

The purpose of the inspection is elimination of any possible shortcomings / deficiencies during the use of the facility.
The facility consisting of façade and roof elements and other end / closing pieces can be exposed to various weather and temperature changes.
Regular maintenance is therefore of vital importance for long service life of a facility.

In accordance with good practice it is necessary to carry out inspection of panels and other structural elements of the facility **minimally once a year**.

In scope of maintenance special attention is to be paid to the following:
- sections where dirt, smoke soot, condensate and water may accumulate
- cleaning of inflow pipes, roof valleys and gutters
- tightening of all structural elements on the structure
- control of all seals on the facility

Activities relating to the regular annual inspection are stated in Annexes 1-6 at the end of the document:

ANNEX 1: Table of activities of regular annual inspection of the Trimoterm SNV system,
ANNEX 2: Table of activities of regular annual inspection of the Trimoterm FTV system,
ANNEX 3: Table of activities of regular annual inspection of the Trimoval system,
ANNEX 4: Table of activities of regular annual inspection of the Qbiss element system,
ANNEX 5: Table of activities of regular annual inspection of the CLEAN ROOM system,
ANNEX 6: Table of activities of regular annual inspection of the CONTAINER system.

Regular inspections and documented minutes of the inspections are a condition for the claims under the guarantee during the guarantee period. The contractor reserves the right to reject any complaint reported if it appears to be a consequence of non-maintenance.

4 Control of tightening of all structural elements

The condition of screws can be easily established by unscrewing some randomly selected screws on various parts of the facility. The condition of seals, joints between seals and fixing elements and possibly rust at screws is to be inspected thoroughly. A seal has to be pressed well against sheet metal so that tightness of a joint is provided. Insulation in panels can eventually get slightly compressed which results in a slot between a seal and a panel, and therefore screws have to be regularly inspected. Loose screws are to be tightened, and rusted screws or worn seals replaced.

5 Control of all seals

The condition of all seals on the facility has to be inspected so that the required water tightness and air tightness of the facility are provided in long-term. All damaged and worn / old seals are to be replaced by new ones.

6 Cleaning

During their use Trimo products are exposed to different surface dirt, increasingly polluted air and large quantities of UV radiation.

In some environments such as industrial estates and areas in the vicinity of motorways the pollution is higher and faster.

The presence of dirt and surface impurities does not spoil only the surface appearance, but can also cause damage to the protective coating and after a longer period of time it can damage the basic material.

Impurities in the air, emissions of sulphur, chlorine and nitrogen compounds soluble in water have especially unfavourable impact on organic coatings and react negatively to a surface of pre-painted sheet metal and shorten service life of the anti-corrosion protection.

In order to be able to achieve the longest possible service life of hot galvanised pre-painted sheet metal it is important to regularly remove surface impurities.

Regular inspections and immediate repairs of the damage caused by glowing cigarette butts and acids that appear around a chimney when heating are urgently necessary.

The complete cleaning of facilities can be carried out by authorised cleaning companies. Trimo service and repair department can provide information on contact persons.

6.1 Removal of small metal particles

Small metal particles that appear as a result of cutting and drilling corrode very quickly and cause mechanical and visible damage to the organic coating. They have to be completely removed from panel surfaces immediately or latest when the daily work has been finished. Soft brooms or suction are used for removal viz. cleaning. The use of tools with integrated power nozzles for suction of waste particles is recommended.

Hot filings that fall on sheet metal surface are extremely dangerous. They sink deeply in the protective coating and cause permanent local damage. Obligatory protection of a sheet metal surface against the subsequent impact of hot filings is recommended.

7 Washing

Washing of all areas of the facility is recommended minimally once a year.

Washing is carried out under pressure (Kercher, Wap) under consideration of the following parameters:
- temperature of washing water: max 60°C,
- water jet pressure: up to 10 bar,
- detergent solution, concentration: up to 10%,
- PH solutions: min. 6 up to max. 9 – for polyester organic coating (SP, PUR),
- PH solutions: min. 4 up to max. 9 – for plastisol organic coating (PVC) and
- PH solutions: min. 4 up to max. 9 – for polyvinylidene fluoride (PVDF).

The complete surface of Trimoterm panels (façade, roof) is to be washed by aqueous solution of an alkaline detergent in the prescribed concentration. After cleaning by a detergent the complete surface is rinsed with clean water. Rinsing is to be carried out from top to bottom so that the cleaning agent is completely removed.

The use of too strong or inadequate cleaning agents damages the coating.

After rinsing with clean water wet surfaces are to be wiped by dry cloths.

Only completed surfaces are to be cleaned so that the surface gets uniform appearance after cleaning.

Waste water as a product of cleaning has to be treated in accordance with the relevant legislation in force.

7.1 Special recommendations

If mould appears the surface has to be cleaned with a suitable solution having the following composition:
- household detergent – 0.5%
- trisodium phosphate – 3.0%
- 5% solution of sodium hypochlorite – 25.0%
- clean and fresh water – 71.5%

After cleaning the surface is to be rinsed with running water.

The use of isopropyl alcohol (2n-propanol) or an alcohol cleaning agent (INCIDIN, producer Ecolab d.o.o.) or mineral cleaning agents based on hydrocarbons (white spirit, Tessarol) is allowed for the removal of stains. Preliminary conduct of a test is recommended on a small surface. When the stain is removed, the surface has to be rinsed well with clean water.

7.2 Warnings

Panel surfaces should not be cleaned in the strong sun or when sheet metal is very hot, if products are constantly exposed to the sun.

The use of strong organic solvents and aggressive cleaning agents or brushes is prohibited for cleaning varnished / painted surfaces.

No exaggerated cleaning or rubbing of the surface is to be carried out since it may damage the high-quality top viz. final varnish. Dark shades and shades having metal appearance are especially sensitive to cleaning.

Bitumen stains have to be immediately cleaned with Tessarol viz. white spirit and concrete stains have to be removed by a wet cloth immediately when they appear!

Important: Each intervention in the roof or façade (construction of openings, assembly of additional elements, ...) without the approval of Trimo results in termination of the guarantee period.

Cleaning agent	
INCIDIN LIQUID Supplier: Ecolab d.o.o. Vajngerlova 4, p.p. 1007 Sl - 2001 Maribor Telephone: + 386 (0) 2 42 93 100 Fax: + 386 (0) 2 42 93 152	Mineral cleaning agent: TESSAROL Producer: HELIOS d.o.o. Količevo 65, SI - 1230 Domžale Telephone: +386 (01) 7213-007 Fax: +386 (01) 7212-257

8 Rehabilitation of mechanical damage to organic coating

The scope of mechanical damage has to be evaluated and on this basis the most suitable approach shall be determined.

In case of minor damage it is sufficient to make repairs (touch up); its procedure is described in this section or attached to the instructions for the use of repair paint.

Replacement of a panel is recommended in case of large-scale damage and when it cannot be repaired in accordance with the described procedure.

Each rehabilitation process including painting is discussed for each facility separately. Activities are carried out in co-operation with the Trimo Service & Repair Department.

Immediate repairs of mechanical damage are recommended, when the damage is still fresh and clean because repairs can be quick and simple then.

If mechanical damage is not repaired immediately after its occurrence / appearance it results in a poor appearance of the surface and shortens the service life of sheet metal.

After a longer period of time repairs of mechanical damage are more complicated and the result may not be excellent since the corrosion and visual differences in shades of pre-painted sheet metal can appear.

Spray paint cannot be used for repairs. Rehabilitation of major dents by polyester putty is not recommended.

8.1 Repair of mechanical damage (touch up)

The following procedure is recommended for repairs of mechanical damage
- local cleaning of a damaged area of sheet metal with rubbing alcohol,
- before use the repair coating is to be well mixed (2 component PUR) in the prescribed ratio of the A component to the B component,
- the coating is applied to a clean and dry surface in the best possible shade of sheet metal.

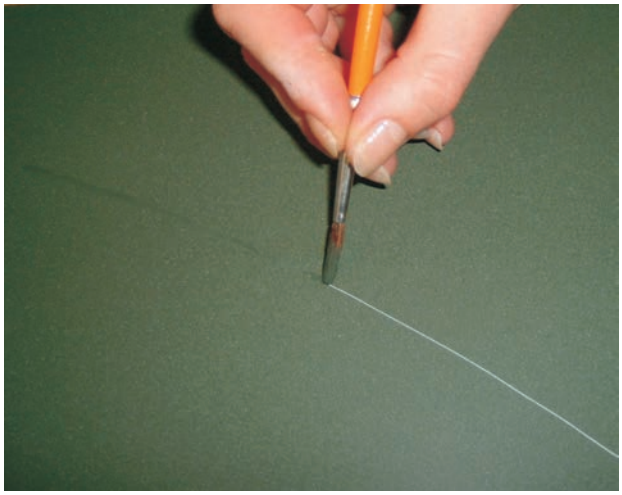
A thin school brush is used for the application of coating.

One layer of paint is sufficient in case of mechanical damage to cover coating. If the coating is damaged to the layer of zinc or basic material, it is recommended to apply another layer of paint when the first layer is completely dry.

The repair coating has to match the shade of pre-painted sheet metal as the best possible approximation.

The paint has to be applied to fully cover the damage viz. the repair. For shades with no perfect covering it is recommended that two layers of covering paint are applied.

Repair coat: 2 component polyurethane, semi-dull, 30GU
REZISTOL EMAJL 2k PUR, shade according to the Ral colour chart viz. a sample of sheet metal, Helios
INTERTHANE 990 SG, shade according to Ral viz. a sample of sheet metal, International
Hempathanne 55210, shade according to Ral viz. a sample of sheet metal, Hempel
Hardtop AS, shade according to Ral viz. a sample of sheet metal, Jotun



Working parameters:
- Air temperature: min.: +10 up to +25 °C
- Rel. air humidity: max.: 80%
- Temperature of the surface should be min 3°C above the dew point.

Working conditions have to be provided for the time of application of the repair paint and the drying time.

8.2 Mechanical damage to corroded surfaces

If corrosion already appeared on pre-painted sheet metal due to too strong and deep mechanical damage that was not rehabilitated on time, it is necessary to thoroughly remove corrosion products. Suitable abrasive cloths can be used. The prime coat containing anti-corrosion pigments is to be initially applied to locally cleaned surfaces. It is recommended to use a 2-component epoxy prime coating. A top coating has to be applied to a dry surface of the prime coating. The same type can be used as for rehabilitation of mechanical damage mentioned under Item 8.1.

A top coating has to match the shade of pre-painted sheet metal as the best possible approximation.

The paint has to be applied to fully cover the damage viz. the repair. For shades with no perfect covering it is recommended that two layers of covering paint are applied. A thin brush is to be used for application of coatings.

The working conditions prescribed in the technical information of the coatings applied are to be considered during work.

Rehabilitation has to be limited to the smallest surface possible. In case of local rehabilitation a visual difference in the shade of the repair coat and the shade of pre-painted sheet metal may appear in the course of time.

The instructions are of informative character.

The contractor carrying out the rehabilitation is fully liable for the guarantee for the performance of rehabilitation.

All other and additional information can be obtained from the Trimo Service Department.

TRIMO Servis
Prijateljeva 12
8210 Trebnje
Tel.: +386 7 34 60 383
Fax.: +386 7 34 60 340

Annex 1: Table of activities of regular annual inspection of the SNV Trimoterm system

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
PANELS AND SHEET METAL ELEMENTS	DEPOSITS around openings	Water and dirt accumulate; coats may appear and cause corrosion, capillary action. Due to this phenomenon water flows behind the edges into the facility and sheet metal corrodes.	Removal of deposits and washing of the area.
	DIRT (in the areas that are not washed by rainwater – e.g. under eaves)	It spoils the appearance of the facility and can cause damage to the paint.	Washing as described in Section 7.
	MOULD (It appears rarely, but it can grow in exceptional conditions)	It spoils the appearance, corrodes, reduces the protection, causes poor hygiene.	The area is to be washed and protected by an anti-mould agent.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, reduces service life of the facility.	Procedures are described in Section 8.
	PRESENCE OF FILINGS (corroded)	They corrode and leave stains on sheet metal surfaces. Walking on roofing covered with filings results in additional damage.	Removal immediately after the occurrence, procedures are described in Section 6.1.
GUTTERS AND VALLEYS	DEPOSITS	Water and dirt accumulate, coats may appear, and cause corrosion.	Removal of deposits and washing of the area, if necessary.
	CLOGGED GUTTERS	Obstacles may cause penetration of water into the facility.	Removal of deposits.
FIXING AND SEALING MATERIAL	ROOF DEFORMATION DUE TO EXTERNAL INFLUENCES (causes leaking of seals under screws and deformation of sealing material)	Leaking may be the reason for penetration of water into the facility and corrosion in the panel.	Tightening of screws, replacement of screws and seals, renewal of sealing material.

* The inspection is carried out minimally once a year viz. according to the plan of maintenance of the facility user.

Annex 2: Table of activities of regular annual inspection of the FTV Trimoterm system

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
PANELS AND SHEET METAL ELEMENTS	DIRT (in areas that are not washed by rainwater e.g. under eaves)	It spoils the appearance of the facility and can cause damage to the paint.	Washing of the areas as described in Section 7.
	MOULD (It appears rarely, but can grow in exceptional conditions)	It spoils the appearance, corrodes, reduces the protection, causes poor hygiene.	Washing of the areas and protection by an anti-mould agent.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, reduces service life of the facility.	Procedures are described in Section 8.
	PRESENCE OF FILINGS (corroded)	They corrode and leave stains on sheet metal surfaces.	They have to be removed as soon as they appear. Procedures are described in Section 6.1.
FIXING AND SEALING MATERIAL	DEFORMATION DUE TO EXTERNAL INFLUENCES (causes leaking of seals under screws)	Leaking may be the reason for penetration of water into the facility and corrosion in the panel.	Tightening of screws, replacement of screws and seals, renewal of sealing material.

* The inspection is carried out minimally once a year viz. according to the plan of maintenance of the facility user.

Annex 3: Table of activities of the regular annual inspection of the Trimoval system

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
PANELS AND SHEET METAL ELEMENTS	DEPOSITS around openings	Water and dirt accumulate, coats may appear and cause corrosion.	Removal of deposits and washing of the area.
	DIRT (in the areas that are not washed by rainwater e.g. under eaves)	It spoils the appearance of the building and can cause damage to the paint.	Washing of the area as described in Section 7.
	MOULD (It appears rarely, but can grow in exceptional conditions)	It spoils the appearance, corrodes, reduces the protection, causes poor hygiene.	Washing of the area and protection by an anti-mould agent.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, and reduces service life of the facility.	Procedures are described in Section 8.
	PRESENCE OF FILINGS (corroded)	They corrode and leave stains on sheet metal surfaces. Walking on roofing covered with filings results in additional damage.	They have to be removed as soon as they appear. Procedures are described in Section 6.1.
GUTTERS AND VALLEYS	DEPOSITS	Water and dirt accumulate, coats may appear, and cause corrosion.	Removal of deposits and washing of the area, if necessary.
	CLOGGED GUTTERS	Obstacles may cause penetration of water into the facility.	Removal of deposits.
INSPECTION OF TIGHTNESS OF FIXING AND CORROSION OF SCREWS	POOR / LEAKING TIGHTNESS OF PANELS AND SHEET METAL	Leaking can be the reason for penetration of water into the facility and can cause corrosion in the panel.	Tightening of screws, replacement of screws and seals, renewal of sealing material.

* The inspection is carried out minimally once a year viz. according to the plan of maintenance of the facility user.

Annex 4: Table of activities of regular annual inspection of the Qbiss One element system

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
QBISS ONE ELEMENTS	DEPOSITS around openings	Water and dirt accumulate, coats may appear and cause corrosion.	Removal of deposits and washing of the area, if necessary.
	DIRT (in areas that are not washed by rainwater e.g. under eaves)	It spoils the appearance of the facility and can cause damage to the paint.	Washing of the area as described in Section 7.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, reduces service life of the facility.	Procedures are described in Section 8.
	PRESENCE OF FILINGS (corroded)	They corrode and leave stains on sheet metal surfaces. Walking on roofing covered with filings results in additional damage.	They have to be removed as soon as they appear. Procedures are described in Section 6.1.
GUTTERS AND VALLEYS	DEPOSITS	Water and dirt accumulate, coats may appear and cause corrosion.	Removal of deposits and washing of the area, if necessary.
	CLOGGED GUTTERS	Obstacles may cause penetration of water into the facility.	Removal of deposits.
INSPECTION OF TIGHTNESS AND CORROSION OF SCREWS	LEAKING OF FIXING OF PANELS AND SHEET METAL	Leaking can be the reason for penetration of water into the facility and corrosion in the panel.	Tightening of screws, replacement of screws and seals, renewal of sealing material.

* The inspection is carried out minimally once a year viz. according to the plan of maintenance of the facility user.

Annex 5: Table of activities of regular annual inspection of the CONTAINER system

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
PANELS	DIRT (in areas that are not washed by rainwater e.g. under eaves)	It spoils the appearance of the facility and can cause damage to the paint.	Washing of the areas as described in Section 7.
	MOULD (It appears rarely, but can grow in exceptional conditions)	It spoils the appearance, corrodes, reduces the in protection, causes poor hygiene.	Washing of the area (Section 7) and protection by an anti-mould agent.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, reduces service life of the facility.	Procedures are described in Section 8 (A 0.25 kg pot of paint is enclosed).
	PRESENCE OF FILINGS (corroded)	They corrode and leave stains on sheet metal surfaces.	They have to be removed as soon as they appear. Procedures are described in Section 6.1.
GUTTERS AND DISCHARGE PIPES	DEPOSITS	Water and dirt accumulate, coats may appear and cause corrosion.	Removal of deposits and washing of the area, if necessary.
	CLOGGED GUTTERS	Obstacles can cause penetration of water into a container.	
CORNER ELEMENTS	ICED WATER IN CORNER ELEMENTS		Removal of ice.

* The inspection is carried out minimally twice a year viz. according to the plan of maintenance of the facility user.
** Detailed instructions for the use and maintenance of Trimo containers are attached to a product.

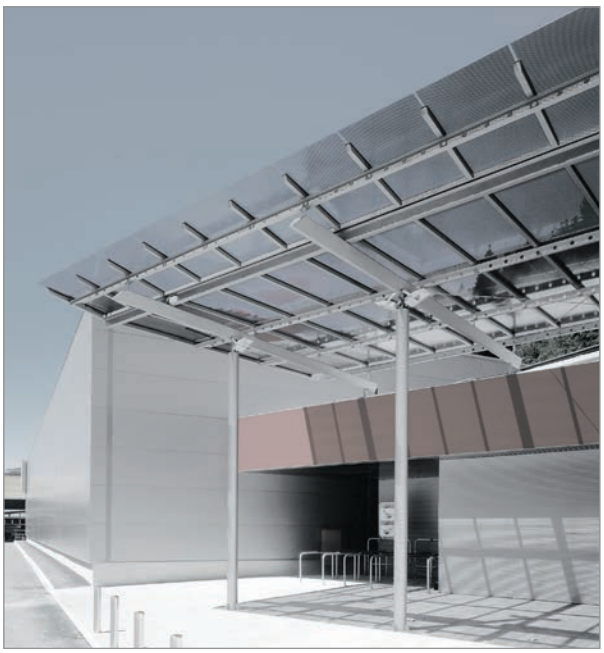
Annex 6: Table of activities of regular annual inspection of the CLEAN ROOM system

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
PANELS	DIRT (on sealing putty)	It spoils the appearance of the facility and can cause damage to the paint.	Washing of the areas as described in Section 7.
	SEALING PUTTY REMOVED (between panels on roundings)	No tightness provided during surface washing.	Removal of the existing and installation of new sealing putty on a clean and dry surface.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, reduces service life of the facility.	Rehabilitation of minor untight areas by sealing putty and major areas by gluing sheet metal patches.

* The inspection is carried out minimally once a year viz. according to the plan of maintenance of the facility user, together with the FTV and SNV systems.

Note

Note



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Published by: TRIMO d.o.o., EN, 02/2017

TRIMO	**MSDS** **Trimoterm Perform R** **Trimoterm Perform C** **Trimoterm Power T** **Trimoterm Power S** **Qbiss One C** **Qbiss One T** **Qbiss One S**	Date of issue: 21.02.2002 Date of Revision: 15.01.2018

1. INDENTIFICATION

1.1. Product identifier:

Generic product name Trimoterm Perform R, Trimoterm Perform C, Trimoterm Power T, Trimoterm Power S, Qbiss One C, Qbiss One T, Qbiss One S,

1.2. Relevant identified uses of the substance or mixture and uses advised against

Product use: Building insulation sandwich panels composed from: Steel substrate, hot dip metallic coat, organic coating layer – paints SP, PVDF, PUR/PA, polyurethane glue and mineral (stone) wool.
Recommended use: Insulated Cladding for Industrial and Commercial Buildings.

1.3. Details of the supplier of the safety data sheet

TRIMO, Prijateljeva 12, 8210 Trebnje, Slovenija.
T.: ++386 7 3460 200 Email: trimo@trimo.si
F.: ++386 7 3044 569 Website: http://www.trimo.si

1.4. Emergency telephone number:

Notification center: 112
Supplier: T.: ++386 7 3460 200

2. HAZARDS INDENTIFICATION

2.1. Classification of the substance or mixture

In accordance with REACH Regulation 1907/2006/ EC
EU Dangerous Substances (67/548/EEC): **The product is not classified**

Directives, and according to the Classification, Labeling and Packaging of substances and mixtures (CLP)
Regulations (EC)1272/2008): **The product is not classified**

2.2. Label elements: There is no Risk Phrases associated with this product

2.3. Other hazards

Main Hazards: Does not contain unhealthy / dangerous substances for human or the environment.

Inhalation - In normal use, it does not present a health hazard and the insulation core is non-toxic unless subject to an ignition source (e.g. cutting with abrasive wheels or involved in a fire) which could produce fumes containing carbon monoxide, hydrogen chloride, hydrogen fluoride, oxides of iron and zinc and other products or decomposition which possibly could be toxic if inhaled.

Handling - Risk of laceration when handling product. May also result in injury from incorrect lifting techniques. Pre-finished steel has sharp edges and corners and precautions should be taken when handling and storing. Under normal conditions of use and storage these materials are stable and non-toxic.

3. COMPOSITION / INFORMATION ON INGRADIENTS

3.1. Steel Substrate, hot dip metallic coating, organic, coating layers- Paint

Product area	Substance	EINECS No.	CAS No.	By Thickness (µm)	Hazard Class Dangerous 67/548/EEC Amended 97/69/EC	Hazard Class (CLP Regs) Regulation CE °N 1272/008
Steel	Iron_Fe	231-096-4	7439-89-6		/	<99,7%
	Carbon_C	231-153-3	7440-44-0		/	<0,95%
Metallic coating layers	Zinc_Zn	231-175-3	7440-66-6	< 20	/	<600g/m2
	Magnesium_Mg	231-104-6	7439-95-4		/	<2%
Organic coating layers (Paints)	Polyester* (SP)	/	/	< 50	/	/
	Polyvinylidene fluoride* (PVDF)	/	/	< 50	/	/
	Epoxide* (EP)	/	/	3 – 15	/	/
	Polyurethane polyamide (PUR-PA)	/	/	< 50	/	/

Stove-enameled coating Standard systems. The color that are not on the list, see the Attachment 1 Section 16, are free of dangerous substances.

3.2. 2K PUR glue

Product area	Substance	EINECS No.	CAS No.	By Weight (g/m^2)	Hazard Class Dangerous	Hazard Class (CLP Regs)
Adhesion layers STEEL-MW	2k PUR	/	/	<210	/	/

2k PUR-- Thermo set inert polymer based on rigid two component polyurethane resins

3.3. Core material

Product area	Substance	REACH No.	CAS No.	By Weight (%)	Hazard Class Dangerous	Hazard Class (CLP Regs)
Sandwich panels core	Rock * mineral fibers	/01-2119472313	/	96 - 98	/	/
	PH**		/	2-4	/	/

* Rock * mineral wool insulation fibers are not classified carcinogenic according to Regulations (EC)1272/2008), page 335 of the joce l353 of December 31, 2008:
** PH= Thermo set inter polymer based on cured phenol formaldehyde risen

4. FIRST AID MEASURES

4.1. Description of first aid measures

General Directions: It is necessary to consider general directions during the handling and fabrication of the sandwich panels.
Inhalation: There is no danger.
Skin contact: Wash skin thoroughly with soap and water or use a proprietary skin cleaner.
Eyes / mouth contact: Irrigate copiously with clean fresh water for at least ten minutes, holding the eyelids apart.
Ingestion: There is no danger.

4.2. Most important symptoms and effects, both acute and delayed

The mechanical effect of fibers with the skin can cause temporary itching

4.3. Indication of any immediate medical attention and special treatment needed

If any adverse reaction or discomfort continues from any of above exposure seek professional medical advice.

5. FIRE FIGHTING MEASURES

Reaction to fire:
A2-s1, d0, EN 13501-1

Resistance to fire:
EI 20 to EI 240, EN 13501-2
REI 30 to REI 180, EN 13501-2
Fire resistance classification is depending on panels thickenss

5.1. Extinguishing media

Foam, CO2 or dry powder, are effective. Persons who extinguish fire must wear protective respiratory equipment with special air leading and protecting clothes.

5.2. Special hazards arising from the substance or mixture

No specific hazard.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precaution in spillage: Not Applicable, the product is a solid.

6.2. Environmental precautions

Environmental protecting measures: The product is a solid, there is no danger to the environment identified.

6.3. Methods and materials for containment and cleaning up

Cleaning steps at accidental spillage: The product is a solid, this is not applicable.

6.4. Reference to other sections

See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling: Where possible, mechanical lifting aid should be used. If this is not possible, kinetic lifting techniques must be used. There is also a risk of laceration therefore cut resistant gloves must be worn. Avoid inhalation of dust when cutting with mechanical tools, this should be achieved by the use of local exhaust ventilation and good general ventilation. If this is not sufficient, suitable respiratory protection must be worn (FFP2) as the core has a Maximum Exposure Limit (MEL) of 5mg/m^3 , 8 hour Time Weighted Average (TWA).

Do not use flame cutting equipment, blowlamps etc., on or near the panels.

7.2. Conditions for safe storage, including any incompatibilities

Storing: Product can be stored freely in the original packing, See N-264,N-265
Directives for fire and explosion protection: Special precautions are not necessary.
Conditions for safe storage: No special cautions.

7.3. Specific end use(s)

Not available.

8. EXPOSURE CONTROLS – PERSONAL PROTECTION

8.1. Control parameters

Technical protection measures: Not required.

8.2. Exposure controls

Respiratory protection: Not Applicable unless cutting in confined space then FFP2 Respiratory protection must be worn.

Hand protection: Cut Resistance Gloves to be worn whilst handling.
Eye protection: Eye protection should be used whilst cutting and drilling as swarf may be produced.
Body protection: Safety boots and protective clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

LOOKS:	in solid form
COLOUR:	different colour shade
SMELL:	not expressive
pH(at100g/H_20):	not expressive
BOILING POINT:	7-8 at 25°C
MELTING POINT:	800-1100°C (mineral fibers)
INFLAMABILITY:	Fire class A2-s1, d0
FLASH POINT:	Not Applicable
EXPLOSIVE PROPERTIES:	No explosive properties
VAPOUR PRESSURE:	Not Applicable
RELATIVE DENSITY:	90 - 140 kg/m^3 (MW core)
WATER DISSOLUATION:	Not Applicable
VISCOSITY:	Not Applicable

10. STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

10.5. Incompatible materials

10.6. Hazardous decomposition products

All insulated materials are in solid form.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute effect: The mechanical effect of fibers with the skin can cause temporary itching

Carcinogenic effect:
Product is free of carcinogenic, mutagenic and teratogenic effects. Scientific studies do not show any effect on lung disease or any other chronic effect on health. Due to their high bio-solubility, stone wool fibers are assessed as substance free from possible carcinogenic effects on health in accordance with EU Directive 97/69/EC (Note Q).

12. ECOLOGICAL INFORMATION

12.1. Toxicity
Stabile product without toxic effects on the environment.

12.2. Persistence and degradability
Stabile product

12.3. Bio accumulative potential
Will not be bio- accumulate

12.4. Mobility in soil
Not available

12.5. Results of PBT and vPvB
Not available

12.6. Other adverse effects
No

12.7. Other ecological information
See Ch. 13.1.

13. DISPOSAL CONSIDERATION

13.1. Waste treatment methods

Product is recyclable.
The local and state legislation must be consider and Trimo declaration.

European waste catalogue (EWC)

Steel substrate:	12 01 02
Glue 2k PUR:	08 04 10
Waste stone wool:	17 06 04

14. TRANSPORT INFORMATION

According to the transportation product is not classified among the dangerous substance.

14.1. **UN number** not classified for transport

14.2. **UN proper shipping name**

14.3. **Transport hazard classes**

14.4. **Packing group**

14.5. **Environmental hazards**

14.6. **Special. precautions for user – Additional information**

See label on handling unit and instructions manual N-264, N-265

14.7. **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)
EU Dangerous Substances (67/548/EEC) /
Directives, and according to the Classification, Labeling and Packaging of substances and mixtures (CLP) regulations (EC)1272/2008).

15.2 Chemical Safety Assessment: not relevant

16. OTHER INFORMATION

This product should not be used for any other purpose, other than those stated on the technical data sheet without first referring to the supplier and obtaining written handling instructions. Additional information you can get from TRIMO.

Attachment 2 - List of SKZ's (Identification of systems)

Customer no.: 2391131
Customer: Trimo Trebnje

SKZ	Paint system	Colour	Valid since	EC-235-759-9 Lead chromate molybdate sulfate red	EC-215-693-7 Lead sulfo chromate yellow	EC-231-846-0 Lead chromate
230037	SP	ca. RAL 3020	1999-10-15	yes	no	no

The information contained in this data sheet is based on the present state of knowledge and current national legislation as extracted from the supplier / manufacturer's material safety data sheet. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

As the specific conditions of use of this product are outside the supplier's control, the user is responsible for ensuring the requirements of relevant legislation are complied with.

DECLARATION OF PERFORMANCE

No. DoP Trimoterm Power T, 07.02.2020_en

1. Unique identification code of the product-type:
Trimoterm Power T, type FTV, FTV HL, SNV

2. Intended use/es:
Self-supporting double skin metal faced insulating sandwich panels.
Roofs and roof cladding,
External walls and wall cladding,
Walls (including partitions) and ceilings within the building envelope.

3. Manufacturer:
Trimo d.o.o., Prijateljeva cesta 12, 8210 Trebnje, Slovenia.

4. Authorised representative: Not applicable

5. System/s of AVCP:
Sys tem 1 (reaction to fire)
System 3 (other properties)

6a. Harmonised standard:
EN 14509:2013, Self-supporting double skin metal faced insulating panels — Factory made products — Specifications

Certificate of constancy of performance issued by NB 1404-ZAG Ljubljana, No. 1404 - CPR - 2115.

Notified body/ies:
1404 – ZAG Ljubljana

7. Declared performances for Trimoterm Power T, type FTV, FTV HL, SNV

MASS

THICKNESS	TYPE			REFERENCE
	FTV	FTV HL	SNV	
50	13,5	13,7	14,8	kg/m^2
60	14,4	14,6	15,7	
80	16,2	16,4	17,5	
100	18,0	18,2	19,3	
120	19,8	20,0	21,1	
133	21,0	21,2	-	
150	22,5	22,7	23,9	
172	24,5	24,7	25,9	
200	27,0	27,2	28,4	
220	29,8	29,0	-	
240	30,6	30,8	32,0	
250	31,5	31,7	-	

Note: mass calculated for steel sheet thickness combination 0,55 mm (external) and 0,5 mm (internal)

WRINKLING STRENGTH – EXTERNAL SIDE - IN THE SPAN

THICKNESS	PROFILE TYPE			REFERENCE	
	M	M3, M8, S, G, V, V2, V6	T		
50	108	94	313	MPa	EN 14509
60	110	94	313		
80	113	102	286		
100	117	110	258		
120	120	118	231		
133	122	118	-		
150	125	118	231		
172	129	118	231		
200	134	118	231		
220	138	112	-		
240	141	106	231		
250	143	103	-		

WRINKLING STRENGTH – EXTERNAL SIDE - IN THE SPAN (ELEVATED TEMPERATURE)

THICKNESS	PROFILE TYPE			REFERENCE	
	M	M3, M8, S, G, V, V2, V6	T		
50	100	87	313	MPa	EN 14509
60	102	87	313		
80	105	95	286		
100	109	102	258		
120	112	110	231		
133	113	110	-		
150	116	110	231		
172	120	110	231		
200	125	110	231		
220	128	104	-		
240	131	99	231		
250	133	96	-		

WRINKLING STRENGTH – EXTERNAL SIDE - AT CENTRAL SUPPORT

THICKNESS	PROFILE TYPE			REFERENCE	
	M	M3, M8, S, G, V, V2, V6	T		
50	86	75	313	MPa	EN 14509
60	87	74	313		
80	87	79	286		
100	88	83	258		
120	88	86	231		
133	87	84	-		
150	86	81	231		
172	86	79	231		
200	86	76	231		
220	86	69	-		
240	85	64	231		
250	84	61	-		

WRINKLING STRENGTH – EXTERNAL SIDE - AT CENTRAL SUPPORT (ELEVATED TEMPERATURE)

THICKNESS	PROFILE TYPE			REFERENCE	
	M	M3, M8, S, G, V, V2, V6	T		
50	80	70	313	MPa	EN 14509
60	81	69	313		
80	81	73	286		
100	82	77	258		
120	81	80	231		
133	81	78	-		
150	80	76	231		
172	80	74	231		
200	80	70	231		
220	80	65	-		
240	79	59	231		
250	78	57	-		

WRINKLING STRENGTH – INTERNAL SIDE - IN THE SPAN

THICKNESS	PROFILE TYPE				REFERENCE	
	M	M2	S, G, V, V2, V6	T		
50	-	126	94	-	MPa	EN 14509
60	-	129	94	-		
80	-	134	102	-		
100	-	140	110	-		
120	-	145	118	-		
133	-	144	118	-		
150	-	144	118	-		
172	-	143	118	-		
200	-	142	118	-		
220	-	141	112	-		
240	-	140	106	-		
250	-	140	103	-		

WRINKLING STRENGTH – INTERNAL SIDE - AT CENTRAL SUPPORT

THICKNESS	PROFILE TYPE				REFERENCE	
	M	M2	S, G, V, V2, V6	T		
50	-	113	85	-	MPa	EN 14509
60	-	115	84	-		
80	-	117	89	-		
100	-	119	94	-		
120	-	120	98	-		
133	-	117	96	-		
150	-	114	93	-		
172	-	110	91	-		
200	-	105	87	-		
220	-	102	81	-		
240	-	98	74	-		
250	-	97	71	-		

MECHANICAL RESISTANCE

THICKNESS	SHEAR STRENGTH	REDUCED LONG TERM SHEAR STRENGTH	SHEAR MODULUS (CORE)	COMPRESSIVE STRENGTH (CORE)	TENSILE STRENGTH	REFERENCE	
50	0,06	0,03	3,70	0,07	0,12	MPa	EN 14509
60	0,05	0,03	3,70	0,07			
80	0,05	0,03	3,70	0,07			
100	0,05	0,03	3,70	0,07			
120	0,05	0,03	2,70	0,07			
133	0,05	0,03	2,70	0,07			
150	0,05	0,03	2,70	0,07			
172	0,05	0,03	2,70	0,07			
200	0,04	0,02	2,70	0,06			
220	0,04	0,02	2,70	0,06			
240	0,04	0,02	2,70	0,06			
250	0,04	0,02	2,70	0,06			

CREEP COEFFICIENT (ALL THICKNESSES)

CREEP COEFFICIENT		REFERENCE
Creep coefficient 2 000 h	0,5	EN 14509
Creep coefficient 100 000 h	0,8	

THERMAL TRANSMITTANCE

THICKNESS	FTV, FTV HL	Ψ (FTV)	Ψ (FTV HL)	SNV	Ψ (SNV)	REFERENCE	
50	0,71	0,034	0,046	0,69	0,018	W/m²K	EN 14509
60	0,60	0,020	0,027	0,59	0,013		
80	0,46	0,010	0,014	0,45	0,007		
100	0,37	0,006	0,008	0,37	0,005		
120	0,31	0,004	0,006	0,31	0,004		
133	0,28	0,003	0,005	-	-		
150	0,25	0,003	0,004	0,25	0,002		
172	0,22	0,002	0,003	0,22	0,002		
200	0,19	0,002	0,002	0,19	0,001		
220	0,17	0,001	0,002	-	-		
240	0,16	0,001	0,001	0,16	0,001		
250	0,15	0,001	0,001	-	-		

Note: thermal transmitance calculated for steel sheet thickness combination 0,7 mm (external) and 0,7 mm (internal)

FIRE RESISTANCE

THICKNESS	WALL					REFERENCE
	FTV		FTV HL[1]		SNV	
	On request	Default	On request	Default	Default	
	Horizontal/ Vertical	Horizontal/ Vertical	Horizontal/ Vertical	Horizontal/ Vertical	Horizontal/ Vertical	
50	NPD / NPD	NPD / NPD	NPD / NPD	NPD / NPD	NPD / NPD	EN 14509
60	NPD / NPD	NPD / NPD	NPD / NPD	NPD / NPD	NPD / NPD	
80	NPD / NPD	NPD/ NPD	NPD / NPD	NPD / EI30	NPD / NPD	
100	NPD / EI30	EI120 / EI120	NPD / NPD	NPD / EI60	EI120 / NPD	
120	EI60 / EI60	EI120 / EI120	EI60 / EI60	NPD / EI120	EI120 / NPD	
133	EI60 / EI60	EI120 / EI120	EI60 / EI60	NPD / EI120	-	
150	EI60 / EI60	EI180 / EI180	EI60 / EI60	EI180 / EI180	EI120 / NPD	
172	EI60 / EI60	EI180 / EI180	EI60 / EI60	EI 240 / EI180	EI120 / NPD	
200	EI240 / EI120	EI240 / EI180	EI60 / EI60	EI 240 / EI180	EI120 / NPD	
220	EI240 / EI120	EI240 / EI180	EI60 / EI60	EI 240 / EI180	-	
240	EI240 / EI120	EI240 / EI180	EI60 / EI60	EI 240 / EI180	EI120 / NPD	
250	EI240 / EI120	EI240 / EI180	EI60 / EI60	EI 240 / EI180	-	

For more information regarding details and spans contact Trimo d.o.o / Technical Support

[1] valid only i->o

*Fire resistance for wall use type defined on base of EN 1364-1 testing on 3 x 3 m furnace, classified on base of EN 13501-2 with additional consideration of EN 14509 - Annex C.2.4. and EN 15254-5 - Ch.5 - T2.

FIRE RESISTANCE

THICKNESS	CEILING		ROOF	REFERENCE
	FTV	SNV	SNV	
50	NPD	NPD	NPD	EN 14509
60	NPD	NPD	NPD	
80	NPD	NPD	NPD	
100	EI120	REI120	REI120	
120	EI120	REI120	REI120	
133	EI120	-	-	
150	EI120	REI120	REI120	
172	EI120	REI120	REI120	
200	EI120	REI120	REI120	
220	EI120	-	-	
240	EI120	REI120	REI120	
250	EI120	-	-	

For more information regarding details and spans contact Trimo d.o.o / Technical Support

*Fire resistance for ceiling use type defined on base of EN 1364-2 testing on 3 x 4 m furnace, classified on base of EN 13501-2 with additional consideration of EN 14509 - Annex C.2.4.

**Fire resistance for roof use type defined on base of EN 1365-1 testing on 3 x 4 m furnace, classified on base of EN 13501-2.

AIRBORNE SOUND INSULATION Rw (C;Ctr)

THICKNESS	FTV, FTV HL	SNV	REFERENCE	
50	NPD	NPD		
60	NPD	NPD		
80	NPD	NPD		
100	NPD	NPD		
120	30 (-1;-3)	NPD		
133	30 (-1;-3)	-	dB	EN 14509
150	30 (-1;-3)	NPD		
172	30 (-1;-3)	NPD		
200	30 (-1;-3)	NPD		
220	30 (-1;-3)	-		
240	30 (-1;-3)	NPD		
250	30 (-1;-3)	-		

WATER PERMEABILITY

THICKNESS	WALL	ROOF	REFERENCE
	FTV, FTV HL	SNV	
All	Class A (1200 Pa)	Class B (900 Pa)	EN 14509

AIR PERMEABILITY

THICKNESS	WALL		ROOF	REFERENCE
	FTV	FTV HL	SNV	
All	n = 1,5 C= 0,00005	n = 0,8055: C= 0,008996	n= 1,00: C= 0,00019	EN 14509

OTHER CHARACTERISTICS - ALL THICKNESSES

CHARACTERISTICS	PROPERTIES			REFERENCE	
CORE TYPE, NOMINAL DENSITY	Stone wool, 90			kg/m^3	EN 14509
THERMAL CONDUCTIVITY	0,039			W/mK	EN 14509
EXTERNAL AND INTERNAL STEEL GRADE	S320GD				EN 10346
EXTERNAL SHEET	0,5 - 0,8			mm	
INTERNAL SHEET	0,4 - 0,8			mm	
EXTERNAL COATING	SP, HDP, PUR, PUR-PA, PVDF, PVC(P)				EN 10169
INTERNAL COATING	SP, HDP, PUR, PUR-PA, PVDF, PVC(P), PVC(F), PET(F)				EN 10169
EXTERNAL FIRE PERFORMANCE (ROOF)	$B_{ROOF\ (t1,t2,t3)}$				EN 13501-5
REACTION TO FIRE	Class	Coating	Profile		EN 13501-1
	A2-s1, d0	SP, HDP, PUR, PUR-PA, PVDF, PET (F)	M, M2, M3, M8, S, G, V, V2, V6, T		
	A2-s2, d0	PVC (F)			
	C-s2, d0	PVC (P)			
SOUND ABSORPTION	NPD			dB	EN 14509
DURABILITY – ALL COLORS	Pass				
RESISTANCE TO POINT LOAD	1,5 kN / 5 m				
REPEATED ACCESS LOAD	NPD				
WATER VAPOUR PERMEABILITY	Impermeable				

Hazards identification: according to GHS/CLP EC N°1272/2008 the product is not classified.

8. The performance of the product identified above is in conformity with the set of declared performance/s.

This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Robert Ajdič
Head of Quality department
Trebnje, 07.02.2020

TRIMO D.O.O.
PRIJATELJEVA CESTA 12
8210 TREBNJE

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Calder Park, Wakefield

Seal id	Level	Location	Seal	X	Y	Penetrating service	Add. seals	Seal type
308	Ground floor	Main office,reception	B - Batt & Mastic - Pattress	200	200	Duct	0	30 Min FS
307	Ground floor	Main office,reception	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	0	30 Min FS
306	Ground floor	Main office,corridor	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	1	30 Min FS
305	3 floor	Main office	A - Batt & Mastic - Wall	500	150	Cable basket/cable tray	0	30 Min FS
304	Ground floor	Main office,corridor	B - Batt & Mastic - Pattress	200	60	Cable basket/cable tray	0	30 Min FS
303	Second floor	Main office,riser	B - Batt & Mastic - Pattress	700	400	Cable basket/cable tray	0	30 Min FS
302	First floor	Main office, open plan office	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	0	30 Min FS
301	First floor	Main office, open plan office	I - HP Mastic to Circular Penetration	60	60	Pipe	0	30 Min FS
300	First floor	Main office, open plan office	B - Batt & Mastic - Pattress	550	300	Conduit/Cable	0	30 Min FS
299	First floor	Main office, open plan office	B - Batt & Mastic - Pattress	200	200	Pipe	0	30 Min FS
298	First floor	Main office, riser	I - HP Mastic to Circular Penetration	80	30	Conduit/Cable	0	30 Min FS
297	First floor	Main office, riser	B - Batt & Mastic - Pattress	600	400	Cable basket/cable tray	0	30 Min FS
296	First floor	Main office, riser	B - Batt & Mastic - Pattress	450	300	Cable basket/cable tray	0	30 Min FS
295	First floor	Main office, disable toilet	B - Batt & Mastic - Pattress	200	80	Cable basket/cable tray	1	30 Min FS
294	First floor	Main office, disable toilet	I - HP Mastic to Circular Penetration	80	80	Pipe	1	30 Min FS
293	First floor	Main office, disable toilet	B - Batt & Mastic - Pattress	600	300	Pipe	0	30 Min FS
292	First floor	Main office, disable toilet	B - Batt & Mastic - Pattress	200	60	Cable basket/cable tray	0	30 Min FS
291	First floor	Main office, corridor	I - HP Mastic to Circular Penetration	80	80	Pipe	1	30 Min FS
290	First floor	Main office, corridor	B - Batt & Mastic - Pattress	300	300	Pipe	1	30 Min FS
289	First floor	Main office, corridor	B - Batt & Mastic - Pattress	200	60	Cable basket/cable tray	0	30 Min FS
288	First floor	Main office, corridor	B - Batt & Mastic - Pattress	200	60	Cable basket/cable tray	0	30 Min FS
287	First floor	Main office, corridor	I - HP Mastic to Circular Penetration	80	80	Pipe	1	30 Min FS
286	First floor	Main office, corridor	B - Batt & Mastic - Pattress	500	200	Duct	0	30 Min FS
285	First floor	Main office, corridor	B - Batt & Mastic - Pattress	300	300	Pipe	1	30 Min FS
284	Second floor	Main office, open.plan office	I - HP Mastic to Circular Penetration	50	25	Duct	0	30 Min FS
283	Second floor	Main office, open.plan office	L - Profile Fillers - Decking Filler - Intubatt	250	100		0	30 Min FS
282	Second floor	Main office, open.plan office	B - Batt & Mastic - Pattress	500	200	Conduit/Cable	0	30 Min FS
281	Second floor	Main office, open.plan office	B - Batt & Mastic - Pattress	200	200	Duct	0	30 Min FS
280	Second floor	Main office, disable toilet	L - Profile Fillers - Decking Filler - Intubatt	250	100		0	30 Min FS
280	Second floor	Main office, open.plan office	B - Batt & Mastic - Pattress	100	50	Cable basket/cable tray	0	30 Min FS
279	Second floor	Main office, disable toilet	I - HP Mastic to Circular Penetration	50	25	Conduit/Cable	0	30 Min FS
278	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	500	200	Conduit/Cable	0	30 Min FS

277	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	200	50	Cable basket/cable tray	0	30 Min FS
276	Second floor	Main office, corridor	I - HP Mastic to Circular Penetration	200	60	Cable basket/cable tray	0	30 Min FS
275	Warehouse	Main office, warehouse ww	I - HP Mastic to Circular Penetration	180	100	Pipe	1	60 Min F/S
274	Warehouse	Main office, warehouse ww	A - Batt & Mastic - Wall	350	100	Pipe	1	60 Min F/S
273	Warehouse	Main office, warehouse ww	F - Pipe Wrap	80	80	Pipe	1	60 Min F/S
272	Warehouse	Main office, warehouse ww	A - Batt & Mastic - Wall	100	100	Pipe	1	60 Min F/S
271	T.floor	Main office, plant	B - Batt & Mastic - Pattress	400	400	Pipe	3	30 Min FS
270	T.floor	Main office, plant	F - Pipe Wrap	110	110	Pipe	2	30 Min FS
269	T.floor	Main office, plant	B - Batt & Mastic - Pattress	700	350	Pipe	1	30 Min FS
268	S.floor	Main office, male toilete	H - Mastic to Circular Penetration	200	200	Duct	2	30 Min FS
267	S.floor	Main office, male toilete	B - Batt & Mastic - Pattress	1200	600	Duct	0	30 Min FS
266	T.floor	Main office, male toilete	I - HP Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
265	T.floor	Main office, male toilete	B - Batt & Mastic - Pattress	600	600	Duct	0	30 Min FS
264	G.floor	Hub office,wc	F - Pipe Wrap	25	25	Conduit/Cable	0	30 Min FS
263	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	0	30 Min FS
262	G.floor	Hub office,wc	H - Mastic to Circular Penetration	20	20	Pipe	1	30 Min FS
261	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	200	200	Pipe	0	30 Min FS
260	G.floor	Hub office,corridor,toilete	B - Batt & Mastic - Pattress	400	400	Cable basket/cable tray	0	30 Min FS
259	G.floor	Hub office,wc	H - Mastic to Circular Penetration	110	110	Duct	0	30 Min FS
258	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	350	350	Duct	0	30 Min FS
257	G.floor	Hub office,wc	F - Pipe Wrap	25	25	Conduit/Cable	1	30 Min FS
256	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	450	300	Conduit/Cable	0	30 Min FS
255	G.floor	Hub office,wc	H - Mastic to Circular Penetration	110	110	Duct	0	30 Min FS
254	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	300	300	Duct	0	30 Min FS
253	G.floor	Hub office,wc	H - Mastic to Circular Penetration	25	25	Pipe	0	30 Min FS
252	G.floor	Hub office,wc	F - Pipe Wrap	25	25	Conduit/Cable	0	30 Min FS
251	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	1	30 Min FS
250	G.floor	Hub office,wc	H - Mastic to Circular Penetration	25	25	Pipe	2	30 Min FS
249	G.floor	Hub office,wc	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	5	30 Min FS
248	G.floor	Hub office,store	A - Batt & Mastic - Wall	100	100	Pipe	1	30 Min FS
247	G.floor	Hub office,store	F - Pipe Wrap	25	25	Conduit/Cable	0	30 Min FS
246	G.floor	Hub office,store	B - Batt & Mastic - Pattress	300	150	Conduit/Cable	0	30 Min FS
245	G.floor	Hub office,store	H - Mastic to Circular Penetration	110	110	Duct	0	30 Min FS
244	G.floor	Hub office,store	B - Batt & Mastic - Pattress	350	350	Duct	0	30 Min FS
243	G.floor	Hub office,dock tower gf office	B - Batt & Mastic - Pattress	450	400	Cable basket/cable tray	0	30 Min FS
242	G.floor	Hub office,dock tower gf office	H - Mastic to Circular Penetration	20	20	Pipe	0	30 Min FS
241	G.floor	Hub office,dock tower gf office	B - Batt & Mastic - Pattress	200	200	Pipe	1	30 Min FS

203	ground floor	Main office, disable toilete	B - Batt & Mastic - Pattress	350	300	Cable basket/cable tray	0	30 Min FS
202	ground floor	Main office, disable toilete	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	0	30 Min FS
201	ground floor	Main office, disable toilete	B - Batt & Mastic - Pattress	300	300	Conduit/Cable	0	30 Min FS
200	ground floor	Main office, disable toilete	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
199	ground floor	Main office, disable toilete	B - Batt & Mastic - Pattress	400	400	Duct	0	30 Min FS
198	ground floor	Main office, disable toilete	B - Batt & Mastic - Pattress	500	300	Cable basket/cable tray	0	30 Min FS
197	ground floor	Main office, disable toilete	F - Pipe Wrap	80	80	Pipe	1	30 Min FS
196	ground floor	Main office, disable toilete	B - Batt & Mastic - Pattress	300	300	Pipe	1	30 Min FS
195	ground floor	Main office, female toilete	F - Pipe Wrap	80	80	Pipe	1	30 Min FS
194	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	250	200	Pipe	1	30 Min FS
193	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	0	30 Min FS
192	ground floor	Main office, female toilete	F - Pipe Wrap	25	25	Conduit/Cable	0	30 Min FS
191	ground floor	Main office, female toilete	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
190	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	500	400	Duct	0	30 Min FS
189	ground floor	Main office, female toilete	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
188	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	300	300	Pipe	0	30 Min FS
187	ground floor	Main office, female toilete	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
186	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	300	250	Pipe	0	30 Min FS
185	ground floor	Main office, female toilete	F - Pipe Wrap	25	25	Conduit/Cable	2	30 Min FS
184	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	200	200	Conduit/Cable	2	30 Min FS
183	ground floor	Main office, female toilete	F - Pipe Wrap	110	110	Pipe	0	30 Min FS
182	ground floor	Main office, female toilete	L - Profile Fillers - Decking Filler - Intubatt	170	70	N/A	1	30 Min FS
181	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	400	300	Pipe	1	30 Min FS
180	ground floor	Main office, female toilete	F - Pipe Wrap	90	90	Pipe	2	30 Min FS
179	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	300	300	Pipe	1	30 Min FS
178	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	450	400	Cable basket/cable tray	0	30 Min FS
177	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	250	200	Pipe	0	30 Min FS
175	ground floor	Main office,lobby corridor	I - HP Mastic to Circular Penetration	150	40	Cable Bunch	0	30 Min FS
176	ground floor	Main office, female toilete	B - Batt & Mastic - Pattress	1200	500	Cable basket/cable tray	0	Air Seal
174	ground floor	Main office,lobby corridor	B - Batt & Mastic - Pattress	550	550	Cable basket/cable tray	0	30 Min FS
173	ground floor	Main office, reception meeting	F - Pipe Wrap	20	20	Conduit/Cable	0	30 Min FS
172	ground floor	Main office, reception meeting	B - Batt & Mastic - Pattress	350	300	Conduit/Cable	0	30 Min FS
171	ground floor	Main office, reception meeting	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
170	ground floor	Main office, reception meeting	B - Batt & Mastic - Pattress	500	400	Pipe	0	30 Min FS
169	ground floor	Main office, reception meeting	I - HP Mastic to Circular Penetration	150	60	Conduit/Cable	0	30 Min FS
168	ground floor	Main office, reception meeting	B - Batt & Mastic - Pattress	400	300	Cable basket/cable tray	0	30 Min FS
167	ground floor	Main office, reception meeting	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS

166	ground floor	Main office, reception meeting	B - Batt & Mastic - Pattress	500	500	Duct	0	30 Min FS
165	ground floor	Main office, riser	I - HP Mastic to Circular Penetration	150	50	Cable basket/cable tray	0	30 Min FS
164	ground floor	Main office, riser	B - Batt & Mastic - Pattress	500	500	Cable basket/cable tray	0	30 Min FS
163	ground floor	Main office, male toilet	H - Mastic to Circular Penetration	80	80	Pipe	1	Air Seal
162	ground floor	Main office, male toilet	B - Batt & Mastic - Pattress	1200	500	Cable basket/cable tray	0	Air Seal
160	ground floor	Main office, male toilet	B - Batt & Mastic - Pattress	400	400	Duct	0	30 Min FS
159	ground floor	Main office, male toilet	H - Mastic to Circular Penetration	200	200	Duct	2	30 Min FS
158	ground floor	Main office, male toilet	B - Batt & Mastic - Pattress	400	400	Duct	1	30 Min FS
157	ground floor	Main office, lobby corridor	H - Mastic to Circular Penetration	20	20	Pipe	0	30 Min FS
156	ground floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	200	200	Pipe	0	30 Min FS
155	ground floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	450	400	Cable basket/cable tray	0	30 Min FS
154	ground floor	Main office, lobby corridor	F - Pipe Wrap	25	25	Conduit/Cable	1	30 Min FS
153	ground floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	1	30 Min FS
152	ground floor	Main office, lobby corridor	I - HP Mastic to Circular Penetration	160	60	Cable basket/cable tray	0	30 Min FS
151	ground floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	400	300	Cable basket/cable tray	0	30 Min FS
150	ground floor	Main office, lobby corridor	I - HP Mastic to Circular Penetration	50	25	Conduit/Cable	0	30 Min FS
149	ground floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	350	200	Conduit/Cable	0	30 Min FS
148	ground floor	Main office, lobby corridor	H - Mastic to Circular Penetration	200	200	Duct	3	30 Min FS
147	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	400	400	Duct	3	30 Min FS
144	Second floor	Main office, female toilet	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
145	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	500	400	Cable basket/cable tray	0	Air Seal
143	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	600	350	Cable basket/cable tray	0	30 Min FS
142	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	300	250	Pipe	0	30 Min FS
141	Second floor	Main office, female toilet	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
140	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	300	300	Pipe	0	30 Min FS
139	Second floor	Main office, female toilet	F - Pipe Wrap	20	20	Conduit/Cable	2	30 Min FS
138	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	0	30 Min FS
137	Second floor	Main office, female toilet	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
136	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	450	450	Duct	0	30 Min FS
135	Second floor	Main office, female toilet	I - HP Mastic to Circular Penetration	25	25		0	30 Min FS
134	Second floor	Main office, female toilet	B - Batt & Mastic - Pattress	250	200	Conduit/Cable	0	30 Min FS
132	Second floor	Main office, male toilet	B - Batt & Mastic - Pattress	150	100	Conduit/Cable	0	30 Min FS
133	Second floor	Main office, male toilet	B - Batt & Mastic - Pattress	500	400	Cable basket/cable tray	0	Air Seal
131	Second floor	Main office, lobby,corridor	B - Batt & Mastic - Pattress	600	250	Cable basket/cable tray	0	30 Min FS
130	Second floor	Main office, lobby,corridor	I - HP Mastic to Circular Penetration	250	40	Cable Bunch	0	30 Min FS
129	Second floor	Main office, lobby,corridor	B - Batt & Mastic - Pattress	600	500	Cable basket/cable tray	0	30 Min FS
128	Second floor	Main office, lobby,corridor	F - Pipe Wrap	20	20	Conduit/Cable	0	30 Min FS

127	Second floor	Main office, lobby,corridor	B - Batt & Mastic - Pattress	300	250	Conduit/Cable	0	30 Min FS
126	Second floor	Main office, lobby,corridor	F - Pipe Wrap	50	50	Pipe	0	30 Min FS
125	Second floor	Main office, lobby,corridor	B - Batt & Mastic - Pattress	350	300	Pipe	0	30 Min FS
124	Second floor	Main office, disable toilet	A - Batt & Mastic - Wall	350	150	Cable basket/cable tray	0	30 Min FS
123	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	600	350	Cable basket/cable tray	0	30 Min FS
122	Second floor	Main office, disable toilet	I - HP Mastic to Circular Penetration	100	20	Conduit/Cable	0	30 Min FS
121	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	300	250	Duct	0	30 Min FS
120	Second floor	Main office, disable toilet	I - HP Mastic to Circular Penetration	20	20	Conduit/Cable	0	30 Min FS
119	Second floor	Main office, disable toilet	I - HP Mastic to Circular Penetration	80	20	Conduit/Cable	0	30 Min FS
118	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	250	200	Conduit/Cable	1	30 Min FS
117	Second floor	Main office, disable toilet	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
116	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	400	400	Pipe	0	30 Min FS
115	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	250	250	Pipe	0	30 Min FS
114	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	550	400	Cable basket/cable tray	0	30 Min FS
113	Second floor	Main office, disable toilet	F - Pipe Wrap	80	80	Pipe	1	30 Min FS
112	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	250	250	Pipe	0	30 Min FS
111	Second floor	Main office, disable toilet	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
110	Second floor	Main office, disable toilet	B - Batt & Mastic - Pattress	450	450	Duct	0	30 Min FS
109	First floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	550	350	Cable basket/cable tray	0	30 Min FS
108	First floor	Main office, lobby corridor	I - HP Mastic to Circular Penetration	150	50	Pipe	0	30 Min FS
107	First floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	600	600	Pipe	0	30 Min FS
106	First floor	Main office, lobby corridor	I - HP Mastic to Circular Penetration	25	25	Conduit/Cable	0	30 Min FS
105	First floor	Main office, lobby corridor	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	0	30 Min FS
104	First floor	Main office, lobby corridor	F - Pipe Wrap	100	30	Pipe	0	30 Min FS
103	First floor	Main office, lobby corridor	F - Pipe Wrap	20	20	Conduit/Cable	0	30 Min FS
102	First floor	Main office, lobby corridor	F - Pipe Wrap	30	30	Pipe	0	30 Min FS
101	First floor	Main office, lobby corridor	A - Batt & Mastic - Wall	250	200	Cable basket/cable tray	0	30 Min FS
100	First floor	Main office,female toilet	I - HP Mastic to Circular Penetration	20	20	Conduit/Cable	0	30 Min FS
99	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	200	150	Conduit/Cable	0	30 Min FS
98	First floor	Main office,female toilet	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
97	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	350	250	Pipe	0	30 Min FS
96	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	400	350	Cable basket/cable tray	0	30 Min FS
95	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	500	400	Cable basket/cable tray	0	Air Seal
94	First floor	Main office,female toilet	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
93	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	400	350	Pipe	0	30 Min FS
92	First floor	Main office,female toilet	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
91	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	400	400	Duct	0	30 Min FS

90	First floor	Main office,female toilet	I - HP Mastic to Circular Penetration	25	25	Conduit/Cable	2	30 Min FS
89	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	2	30 Min FS
87	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	200	150	Conduit/Cable	0	30 Min FS
88	First floor	Main office,male toilet	B - Batt & Mastic - Pattress	600	400	Cable basket/cable tray	0	Air Seal
86	First floor	Main office,disable toilet	F - Pipe Wrap	80	80	Purlin	0	30 Min FS
85	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	300	250	Pipe	0	30 Min FS
84	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	600	400	Cable basket/cable tray	0	30 Min FS
83	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	750	400	Cable basket/cable tray	0	30 Min FS
82	First floor	Main office,disable toilet	F - Pipe Wrap	20	20	Conduit/Cable	4	30 Min FS
81	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	300	250	Conduit/Cable	0	30 Min FS
80	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	200	250	Conduit/Cable	0	30 Min FS
79	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	350	350	Conduit/Cable	0	30 Min FS
78	First floor	Main office,disable toilet	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
77	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	300	250	Pipe	0	30 Min FS
76	First floor	Main office,disable toilet	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
75	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	500	450	Duct	0	30 Min FS
74	First floor	Main office,disable toilet	H - Mastic to Circular Penetration	200	200	Duct	0	30 Min FS
73	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	400	400	Duct	0	30 Min FS
72	First floor	Main office,disable toilet	B - Batt & Mastic - Pattress	600	350	Cable basket/cable tray	0	30 Min FS
71	First floor	Main office,male toilet	H - Mastic to Circular Penetration	20	20	Pipe	0	30 Min FS
70	First floor	Main office,male toilet	A - Batt & Mastic - Wall	100	100	Pipe	0	30 Min FS
69	First floor	Main office,male toilet	F - Pipe Wrap	60	60	Pipe	0	30 Min FS
68	First floor	Main office,male toilet	B - Batt & Mastic - Pattress	300	250	Pipe	1	30 Min FS
67	First floor	Main office,female toilet	F - Pipe Wrap	60	60	Pipe	0	30 Min FS
66	First floor	Main office,female toilet	B - Batt & Mastic - Pattress	300	250	Pipe	0	30 Min FS
66	1	Ground floor riser	A - Batt & Mastic - Wall	300	300	Duct	3	60 Min F/S
65	1	Doc tower GF toilet	F - Pipe Wrap	55	55	Pipe	0	30 Min FS
64	1	Doc tower GF toilet	B - Batt & Mastic - Pattress	300	300	Pipe	0	30 Min FS
63	1	Doc tower GF office	F - Pipe Wrap	55	55	Pipe	0	30 Min FS
62	1	Doc tower GF office	B - Batt & Mastic - Pattress	300	300	Conduit		30 Min FS
61	1	Doc tower GF office	I - HP Mastic to Circular Penetration	60	60	Conduit	0	30 Min FS
60	1	Doc tower GF office	B - Batt & Mastic - Pattress	250	350	Conduit	0	30 Min FS
59	1	Doc tower GF office	I - HP Mastic to Circular Penetration	60	60	Conduit	2	30 Min FS
58	1	Doc tower GF office	B - Batt & Mastic - Pattress	600	400	Conduit	0	30 Min FS
57	1	FF fire escape stairs	I - HP Mastic to Circular Penetration	220	70	Cable basket/cable tray	0	30 Min FS
56	1	FF fire escape stairs	B - Batt & Mastic - Pattress	600	500	Cable basket/cable tray	0	30 Min FS
55	2	SF lobby	F - Pipe Wrap	80	80	Pipe	0	30 Min FS

54	2	SF lobby	B - Batt & Mastic - Pattress	600	600	Cable basket/cable tray	0	30 Min FS
53	2	SF male toliet	H - Mastic to Circular Penetration	80	80	Pipe	0	30 Min FS
52	2	Ew-11Sf	I - HP Mastic to Circular Penetration	200	80	Pipe	0	30 Min FS
51	2	Ew-11Sf	B - Batt & Mastic - Pattress	500	250	Cable basket/cable tray	0	30 Min FS
50	2	Ew-11Sf	A - Batt & Mastic - Wall	2200	80	Steel Beam	0	30 Min FS
49	2	Ew-11Sf	A - Batt & Mastic - Wall	170	400	Purlin	0	30 Min FS
48	2	SF offices	F - Pipe Wrap	100	80	Pipe	0	30 Min FS
47	2	SF offices	B - Batt & Mastic - Pattress	350	280	Pipe	0	30 Min FS
46	2	SF offices	B - Batt & Mastic - Pattress	550	320	Cable basket/cable tray	0	30 Min FS
44	2	SF offices	B - Batt & Mastic - Pattress	280	250	Pipe	0	30 Min FS
45	2	SF offices	F - Pipe Wrap	80	80	Pipe	0	30 Min FS
43	2	SF fire escape stair	I - HP Mastic to Circular Penetration	80	80	Conduit/Cable	0	30 Min FS
42	2	SF fire escape stair	B - Batt & Mastic - Pattress	250	360	Conduit/Cable	0	30 Min FS
41	2	SF fire escape stair	B - Batt & Mastic - Pattress	250	250	Conduit/Cable	0	30 Min FS
40	2	SF fire escape stair	B - Batt & Mastic - Pattress	250	250	Cable Bunch	0	30 Min FS
39	2	SF fire escape stair	I - HP Mastic to Circular Penetration	180	80	Pipe	0	30 Min FS
38	2	SF fire escape stair	B - Batt & Mastic - Pattress	500	250	Cable basket/cable tray	0	30 Min FS
36	1	FF office	I - HP Mastic to Circular Penetration	130	60	Cable basket/cable tray	0	30 Min FS
37	1	FF office	F - Pipe Wrap	40	40	Pipe	0	30 Min FS
35	1	FF office	A - Batt & Mastic - Wall	300	560	Cable basket/cable tray		30 Min FS
34	1	FF office	F - Pipe Wrap	40	40	Pipe	0	30 Min FS
33	1	FF office	B - Batt & Mastic - Pattress	300	300	Pipe	0	30 Min FS
32	1	FF fire escape stairs	I - HP Mastic to Circular Penetration	60	60	Conduit	0	30 Min FS
31	1	FF fire escape stairs	B - Batt & Mastic - Pattress	308	400	Conduit	0	30 Min FS
30	1	FF fire escape stairs	I - HP Mastic to Circular Penetration	300	60	Cable basket/cable tray	0	30 Min FS
29	1	FF fire escape stairs	B - Batt & Mastic - Pattress	550	400	Cable basket/cable tray	0	30 Min FS
28	1	FF fire escape stairs	I - HP Mastic to Circular Penetration	60	60	Conduit	1	30 Min FS
27	1	FF fire escape stairs	B - Batt & Mastic - Pattress	600	300	Conduit	0	30 Min FS
26	1	FF fire escape stairs	H - Mastic to Circular Penetration	30	30	Cable Bunch	3	30 Min FS
25	1	Sf1male toilets	B - Batt & Mastic - Pattress	300	300	Pipe	0	30 Min FS
24	1	Sf1male toilets	B - Batt & Mastic - Pattress	250	350	Pipe	0	30 Min FS
23	2	Sf2 male toilets	B - Batt & Mastic - Pattress	300	300	Pipe	0	30 Min FS
21	3	Office	B - Batt & Mastic - Pattress	240	240	Pipe	0	30 Min FS
22	3	Office	F - Pipe Wrap	40	40	Pipe	0	30 Min FS
20	3	SF 2 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
19	3	SF 2 male toilet	B - Batt & Mastic - Pattress	250	300	Conduit	0	30 Min FS
18	3	SF 2 male toilet	A - Batt & Mastic - Wall	300	300	Duct	0	30 Min FS

17	3	SF 2 male toilet	A - Batt & Mastic - Wall	300	300	Duct	0	30 Min FS
16	3	SF 2 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
15	3	SF 2 male toilet	B - Batt & Mastic - Pattress	250	300	Conduit	0	30 Min FS
13	3	SF 2 male toilet	B - Batt & Mastic - Pattress	300	300	Conduit	0	30 Min FS
14	3	SF 2 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
12	3	SF 3 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
11	3	SF 3 male toilet	B - Batt & Mastic - Pattress	230	310	Conduit	0	30 Min FS
10	3	SF 3 male toilet	F - Pipe Wrap	40	40	Pipe	0	30 Min FS
9	3	SF 3 male toilet	B - Batt & Mastic - Pattress	230	250	Pipe	0	30 Min FS
8	3	SF 3 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
7	3	SF 3 male toilet	A - Batt & Mastic - Wall	240	310	Conduit	0	30 Min FS
6	3	SF 3 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
5	3	SF 3 male toilet	B - Batt & Mastic - Pattress	240	310	Conduit	0	30 Min FS
4	3	SF 3 male toilet	F - Pipe Wrap	40	40	Conduit	0	30 Min FS
3	3	SF 3 male toilet	B - Batt & Mastic - Pattress	240	310	Conduit	0	30 Min FS
2	2	SF male toilet	F - Pipe Wrap	50	50	Pipe	0	30 Min FS
1	2	SF male toilet	B - Batt & Mastic - Pattress	308	300	Pipe	0	30 Min FS