

TECH COATINGS
FIRE RATED SYSTEMS
TIMBER PENETRATION
TECHNICAL DATA SPECIFICATION

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W2PBTP60

TECH COATINGS FIRE RATED SYSTEMS

PRODUCT/s: FBL-100, BOSS FireMastic-HPE™

SUBSTRATE: 13mm Plasterboard Timber Penetration

FIRE RESISTANCE RATING: 60/60/60

This system has been tested to AS 1530.4:2014 to provide a 60/60/60 fire rating level for timber penetrating a 60-minute fire wall. The system can provide an FRL for timber needing 4-sided protection, or timber needing 3-sided protection that is lined with either a combustible or non-combustible substrate.

PRODUCT/s DESCRIPTION

FBL-100 Intumescent Coating

FBL-100 is a Halogen Free, Low VOC, Acrylic Co-Polymer Latex thin film Intumescent Coating System especially designed for interior passive fire protection of multiple substrates that will be exposed to view. This hard, durable, abrasion resistant product has a smooth, white architectural finish that is perfect for the refurbishment & upgrade of passive fire protection in existing or new building stock.

TECHNICAL DATA

Color	White
Specific Gravity	7.5 – 8.5
PH Range	7.5 – 8.5
Weight/Litre	1.38kg
Volume Solids	68%
Weight Solids	70%
Viscosity	1800cP
VOC	19 g/lit (Low)
Adhesion-Strength	400psi
Shore D Hardness	77 (extra hard)
Scrub-Resistance	35 cycles

*All tests carried out by KTA-Tator

BOSS FireMastic-HPE

FireMastic-HPE is a graphite-based, thixotropic, one-part acrylic emulsion that is designed to resist the passage of fire and smoke. Under heat, FireMastic-HPE will expand with enough pressure to close PVC pipes and seal around cables and metal pipes to maintain the integrity and insulation performance of the seal, yet without placing any unnecessary pressure on the building substrate.

The sealant is intended for use in either linear gap seals or services penetrations through walls where fire integrity and insulation need to be preserved. Under fire conditions the product expands up to 40 times its volume and exerts pressure to the surrounding substrates leading to closure of the penetration. The integrity and insulation are then maintained by the stability of the remaining product char.

TECHNICAL DATA

Description	Aqueous Thixotropic Paste
Density	1.3g/cm ³
Colour	Grey
Application Temp	5 °C – 30 °C
Activation Temp	180 °C
Skin Time	15 min @ 25 °C/50%RH
PH Range	8 – 9

SCOPE OF USE

The system has been designed, tested and is approved for use in interior environments C1 and C2.

LIMITATIONS OF USE

Although the system is designed to be used in interior environments C1 and C2, it may be approved for use in other interior environments on a case by case basis.

EXISTING OR NEW TIMBER PENETRATIONS.

The system has been tested for use on timber penetrating a 60/60/60 13mm thick fire rated plasterboard wall. The system can be used to provide 4-sided protection or 3-side protection, with either combustible or non-combustible substrates on the 4th side.

APPLICATION/INSTALATION

Only an approved installer/applicator, that has been trained by Tech Coatings/BOSS, to ensure that the FireMastic-HPE and FBL-100 will be installed/applied as per the strict requirements set out in the current version of Tech Coatings 'Technical Application Manual' will be allowed to install this system.

– SURFACE PRPERATAION

- 1. Rough-sawn timbers should be thoroughly brushed with the grain to remove dust and dirt before painting. Timber affected by superficial grease and oil may be successfully treated by wiping down with a solvent- or water-borne degreasing agent. All sharp edges on the timber to be coated need to rounded off.
- 2. The plasterboard is to be jointed and finished as per the GIB site guide (Sept 2018).

– ANNULAR GAP

- The annular gap should be between 5mm – 20mm.
- The annular gap at the timber/wall interface is filled with BOSS FireMastic-HPE™ to a nominal depth of 13mm.

– PRIMER

- A primer is not necessary for adhesion.

– INTUMESCENT COATING

- FBL-100 can be applied by brush (recommended) or by airless pump. If applying by brush ensure that the brush has short stiff bristles. Care needs to be taken that the film builds for each coat of FBL-100 have been achieved. A WFT gauge is to be used to ensure consistency of film build is achieved. The nominal DFT required is 1000µm.
- 4-Sided Protection
 - The coatback along the timber penetration from the wall/timber interface will be 300mm. The nominal DFT required is 1000µm.
 - A patch is painted on the wall at the wall/timber interface, 100mm off each of the exposed timber profiles. The nominal DFT required is 1000µm.
- 3-Sided Protection
 - The 3 exposed sides of the timber penetration are treated as above.
 - At the timber/substrate interface, paint a 100mm wide patch on the substrate either side of the timber penetration profile. The coatback will be as long as needed for the substrate involved, 500mm for a combustible substrate, 300mm for a non-combustible substrate.
- *Please refer to Appendix A for drawings.*



- **SPREAD RATE**

- Theoretical Spread Rate $\frac{1000}{1000} \times \text{Volume solids (.68)} = .68\text{m}^2/\text{L}$

- **ADDITIVES/THINNING**

- No additives except water are permitted to be added to the coating. Although thinning of the coating is not necessary for normal application, it may be diluted up to 10% if needed to help with application. Thinning will affect the volume solids and this needs to be taken into account when working out Wet Film Thickness (WFT).

- Thinning (Water only)

- $$\text{WFT} = \frac{\text{DFT}}{(\%VS / 100 + \% \text{ of water added})}$$

- 5% / 95ml $\text{WFT} = 1000\mu / (.68/1.05 = .65) = 1538\mu \text{ WFT}$
- 10% / 189ml $\text{WFT} = 1000\mu / (.68/1.10 = .62) = 1612\mu \text{ WFT}$

- **TOP COAT**

- Tech Coatings recommends that FBL-100 be top coated with an approved high-quality waterborne enamel. This not only provides the coating with protection against environmental damage, but also means that when carrying out maintenance, you can simply re-paint the topcoat for continued protection.

QUALITY ASSURANCE/QUALITY CONTROL

QA & QC are vital to show that the specification has been followed. These documents will form part of the PS3 documentation that will be provided to the PS4 author as evidence that compliance has been achieved.

**Refer to Tech Coatings, Timber Penetration installation process & quality assurance.*

THIRD PARTY INSPECTION

TCNZ reserve the right to conduct random audit to ensure that the strict guidelines for QA and QC are being adhered to. The inspector may be from TCNZ or another certified 3rd inspection company.

HEALTH & SAFETY

TCNZ are committed to Health and Safety and as such are members of SiteSafe New Zealand. TCNZ health and safety policies will always comply with the provisions of the Health and Safety at Work Act 2015, the regulations made under that act, and all appropriate and relevant code of practice, standards and guidelines that apply to business.

TCNZ MSDS sheets must be used in conjunction with this specification.

For any further information pertaining to the specification please contact Tech Coatings.



DISCLAIMER: Tech Coating NZ Ltd will have no liability to any party whatsoever in respect of the performance and/or fitness for purpose of the specification in the event of the claimant not being able to demonstrate compliance with the 'TCNZ Technical Application Manual, Interior substrates'. Tech Coatings NZ Limited is not responsible for determining the suitability of FBL-100 to substrates other than those that we have tested. The information contained in this document is given to the best of Tech Coatings NZ Ltd knowledge based on testing and practical experience. *Tech Coatings NZ Limited is the exclusive distributor (Supplier) for the manufacturer of this product, International Coating Group (Manufacturer). To the extent the Supplier supplies Goods to a Consumer pursuant to the Consumer Guarantees Act 1993 (Act), you are entitled to the guarantees set out within the Act, including any additional applicable remedies under New Zealand consumer law against the Manufacturer. These rights are the only guarantees which the Supplier offers in relation to this Good and are, to the fullest extent permitted by law, in lieu of all other express or implied warranties applicable to the Good whether statutory or otherwise. This guarantee applies to defects in the manufacture or formulation of the Good and does not cover failure caused by any factors beyond our control.

TECHNICAL DATA SPECIFICATION

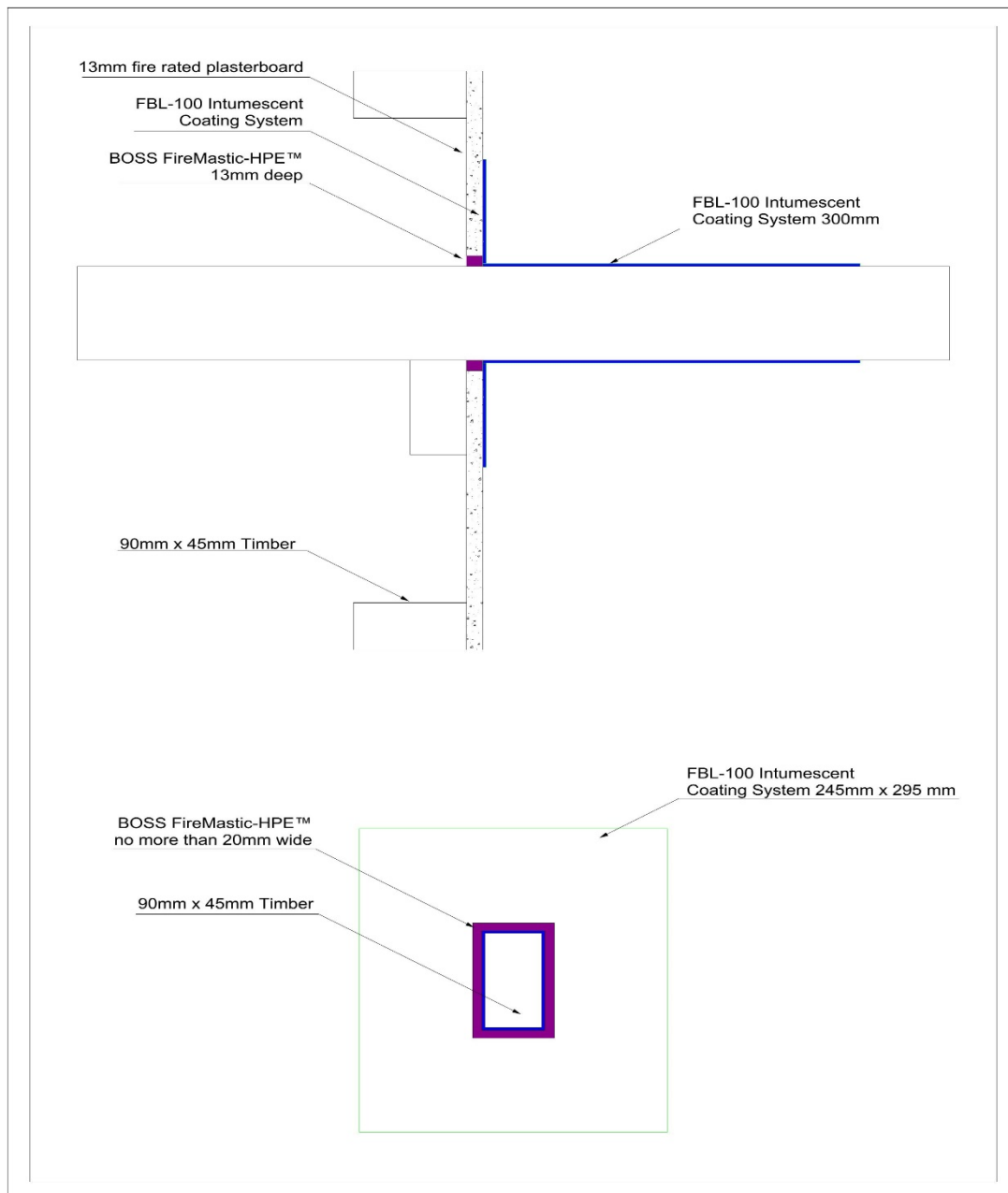
TCNZ FIRE RATED SYSTEM: W2PBPTL60

PRODUCT/S: FBL-100, BOSS FireMastic-HPE™

SUBSTRATE: Timber Penetration - 4 side protection

FIRE RESISTANCE RATING: 60/60/60

Four-Sided Protection



TECHNICAL DATA SPECIFICATION

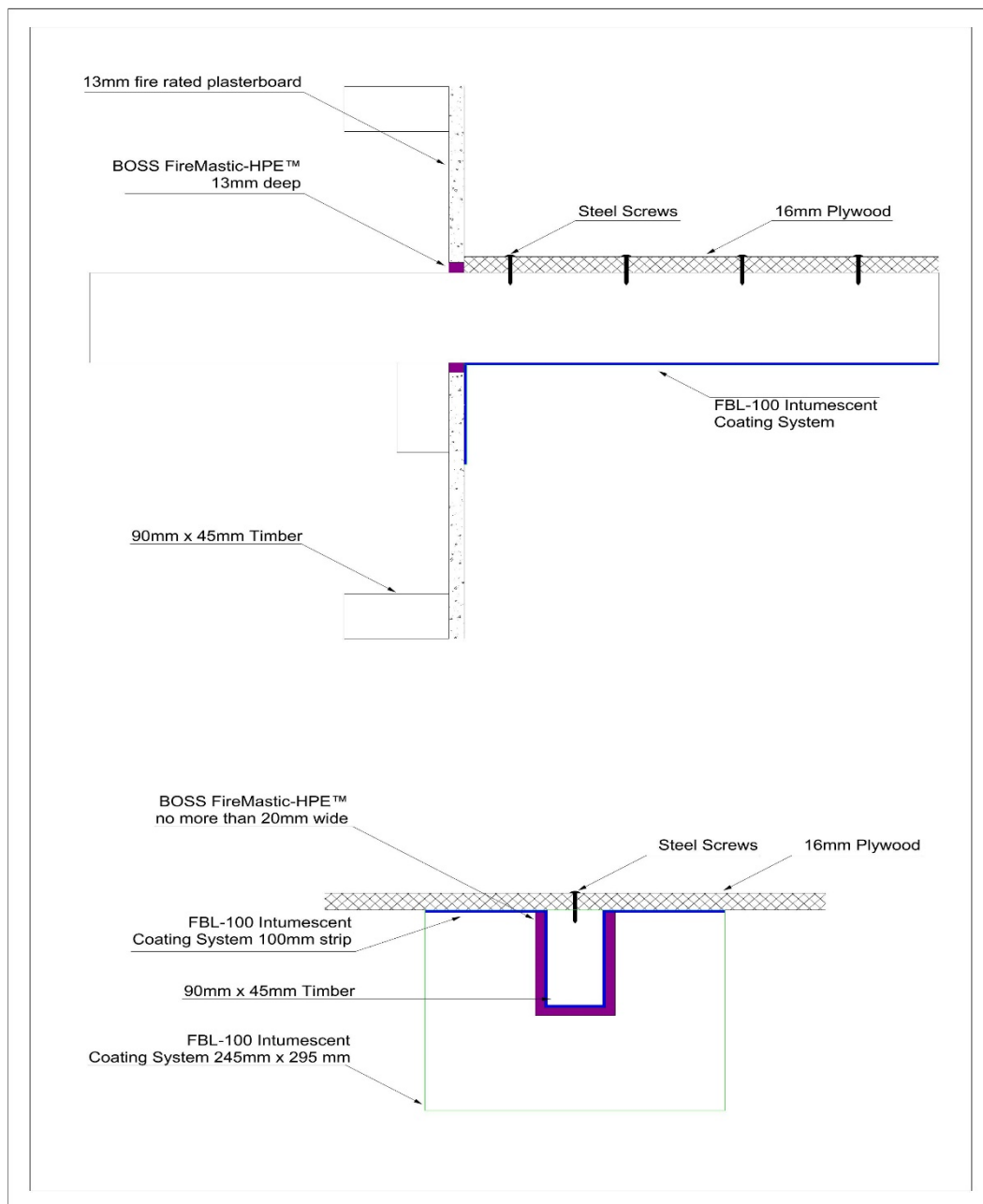
TCNZ FIRE RATED SYSTEM: W2PBPTL60

PRODUCT/SYSTEM: FBL-100, BOSS FireMastic-HPE™

SUBSTRATE: Timber Penetration with combustible substrate.

FIRE RESISTANCE RATING: 60/60/60

Three-Sided Protection with combustible substrate



TECHNICAL DATA SPECIFICATION

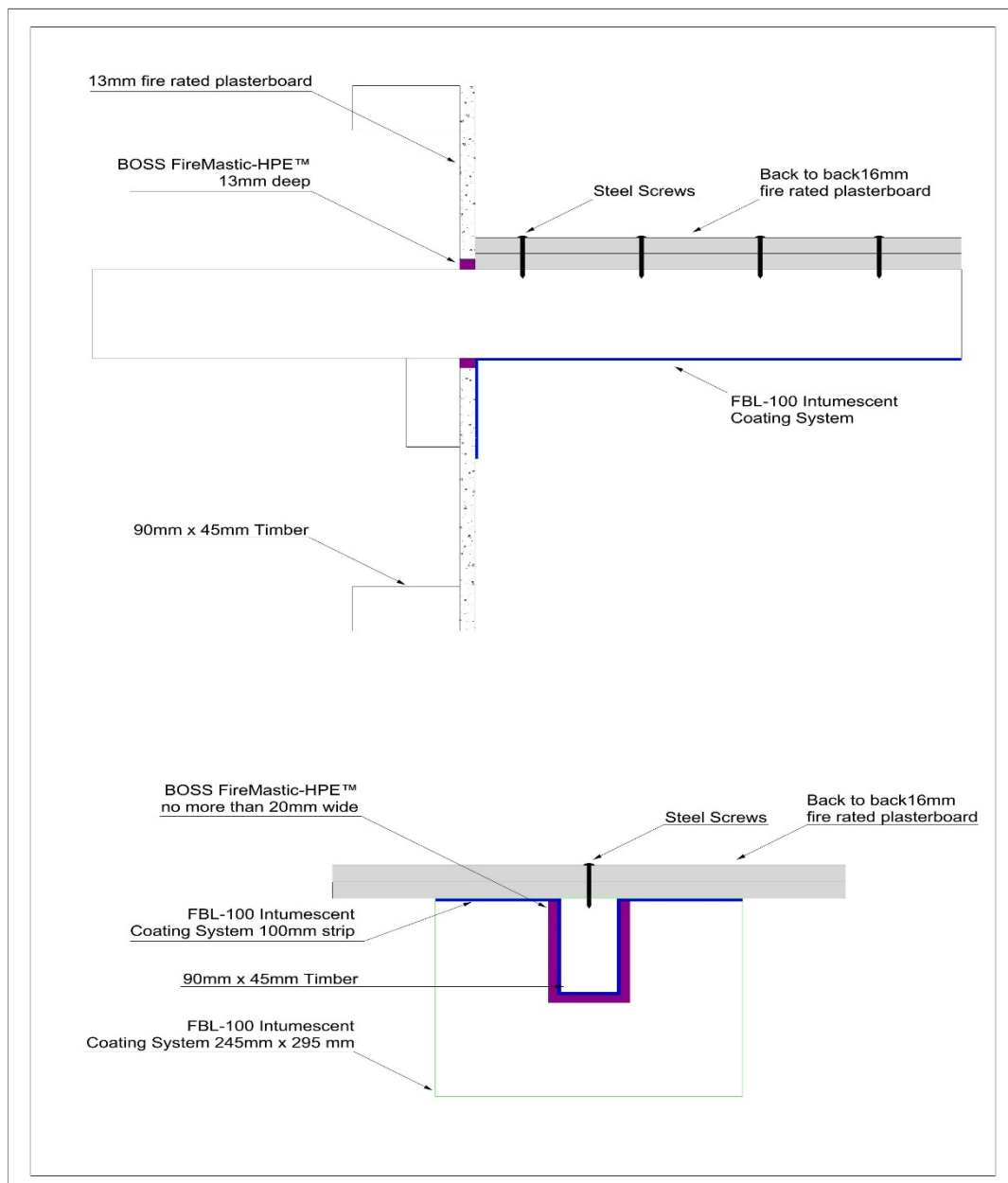
TCNZ FIRE RATED SYSTEM: W2PBPTL60

PRODUCT/SYSTEM: FBL-100, BOSS FireMastic-HPE™

SUBSTRATE: Timber Penetration with non-combustible substrate.

FIRE RESISTANCE RATING: 60/60/60

Three-Sided Protection with non-combustible substrate





TECH COATINGS

FBL- 100 PRODUCT DATA SHEET

FBL-100

Fire and Thermal Barrier Latex

FBL-100 is a halogen free, low VOC, acrylic co-polymer latex thin film Intumescent Coating System (ICS) especially designed for interior passive fire protection of multiple substrates that will be exposed to view. This hard, durable, abrasion resistant product has a smooth, white aesthetic finish that is perfect for the refurbishment and upgrade of passive fire protection in existing or new building stock.

FBL-100 is tested and assessed as per NZBC C/AS2 - C/AS6 Appendix C, for interior use only, as part of providing a "Fire Resistance Rating" (FRR) of up to 60/60/60 on both:

- Timber (or better) framed walls exposed to fire from either or both sides (two-way FRR), or exposed to fire from the coated side (one-way FRR) and
- Timber framed (or better) floor/ceiling systems exposed to fire from below in residential, commercial or industrial buildings on the following substrates:
 - 13mm GIB standard plasterboard
 - 6mm Fibre cement sheet
 - 12mm H2 Ecoply plywood
 - Exposed Radiata pine floors/ceilings (underside only)

FBL-100 is tested and assessed as per NZBC C/VM2 Appendix A and can be used to prevent spread of fire on interior wall or ceiling substrates.

- FBL-100 achieves Group rating of 2-S on Type 1 or better substrates (9-mm Plywood) as per NZBC C/CVM2 Appendix A1.6 Table A2.

*Can also be used to protect internal load-bearing wood from fire, therefore reducing cross-sectional areas required as per NZS 3603:1993

Key Features

- Tested as per NZBC C/AS2 -C/AS6 Appendix C.
- Tested as per NZBC C/VM2 Appendix A.
- Water-borne, 100% halogen and asbestos free.
- Low VOC (Limits, 5 gram – 49 gram).
- Fast cost-effective application.
- Single component thin film application.
- Attractive smooth architectural finish.
- Achieves a level 4 finish post application.
- Lightweight with high impact resistance.
- Durable – low maintenance.
- Will not dust, flake, nor delaminate.
- FBL-100 is classified as a non-dangerous good according to NZS 5433.
- FBL-100 cleans up easily with warm water and mild soap. There are no HAZMAT, OSHA or EPA requirements.

Technical Data

• Color	White
• Specific Gravity	7.5 – 8.5
• PH Range	7.5 – 8.5
• Weight/Litre	1.38kg
• Volume Solids	68%
• Weight Solids	70%
• Viscosity	1800cP
• Low VOC	19 g/lit
• Adhesion-Strength	400psi
• Shore D Hardness	77(extra hard)
• Scrub-Resistance	35 cycles

All coatings tests carried out by KTA-Tator, USA

All test certificates, reports and assessments are available upon email request.

Safety Data Sheet – FBL-100**1. Identification****Product Name:** FBL-100**Recommended Use:** Fire/thermal barrier**Manufacturer:****Name:** International Coatings Group**Address:** 757 SE 17th Street, Suite 846
Fort Lauderdale
FL 33316**Phone:** (317) 218-7922**Supplier:****Name:** Tech Coatings**Address:** PO Box 18028
Merrilands
New Plymouth 4360
New Zealand**Phone:** +64 21 483 444**Email:** shanew@techcoatings.co.nz**Website:** www.techcoatings.co.nz**Emergency Contacts:** Emergency Services (Fire, Ambulance, Police) – Dial 111
National Poisons Information Centre – 0800 764 766 (0800 POISON)**2. Hazard Identification****Statement of Hazardous Nature:**

This preparation is classified as a health or environmental hazard according to the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017.

Not classified as a Dangerous Good according to NZS 5433

Hazard Classification:

WARNING

6.3B

Prevention Statements:

Read label before use

Read safety data sheet before use

Hazard Statements:

Causes mild skin irritation

3. Composition & Informatic n on Ingredients

Ingredient	CAS Number	Percentage Composition %
Ammonium Polyphosphate	68333-79-9	20-30
Water	7732-18-5	<20
2,4,6-Triamino-1,3,5-triazine	108-78-1	5-10
Pentaerythritol	115-77-5	5-10
Titanium Dioxide	13463-67-7	<10
Glass, oxide	65997-17-3	<10
Aluminium Trihydrate	21645-51-2	<5
Nonylphenoxyethoxyethanol	127087-87-0	<5
Coalescing Aid	N/A	<5

4. First Aid Measures

New Zealand Poisons & Hazardous Chemicals National
Information Centre
phone 0800 POISON – 0800 764 766

Skin: If on skin, wash with water. If skin irritation occurs, get medical advice/attention.**Eyes:** If in eyes, rinse thoroughly with water. If eye irritation occurs, get medical advice/attention.**Ingestion:** Do not induce vomiting. Get medical advice/attention if you feel unwell.**Inhalation:** If inhaled, remove to fresh air. Get medical advice/attention if you feel unwell.**Advice to Doctor:** Treat symptomatically.**5. Fire Fighting Measures****Flammability:** Not flammable**Extinguishing media:** Use appropriate for surrounding materials. Prevent contamination of drains or water ways.**Unsuitable extinguishing media:** Use of water spray when fighting fire may be inefficient.**Hazardous Combustion products:** No information available.

6. Accidental Release Measures

Spills: Absorb spill with sand or similar. Collect and place in labelled, sealable containers for disposal. Prevent spill from entering storm water and sewer drains and watercourses.

7. Handling & Storage

Safe Handling

Before use carefully read the product label and safety data sheet.

Use of safe work practices are recommended to avoid eye or skin contact.

Observe good personal hygiene, including washing hands before eating.

Prohibit eating, drinking and smoking in work areas.

Storage

Store in cool, dry area, removed from foodstuffs.

Ensure there is sufficient ventilation for storage.

Ensure containers are labelled, protected from physical damage and sealed when not in use.

Keep away from direct sunlight.

Prevent from freezing.

Don not store at temperatures below 0°C or above 39°C.

8. Exposure Controls & Personal Protection

Exposure Standards

NZ Workplace Exposure Standards (WES):

Ingredient	CAS Number	TWA*
Pentaerythritol	115-77-5	10mg/m ³
Titanium Dioxide	13463-67-7	10mg/m ³
Glass, oxide	65997-17-3	

International Exposure Standards:

Ingredient	CAS Number	ACGIH TLV [†]	OSHA PEL [†]	NIOSH IDLH [†]
Pentaerythritol	115-77-5	TWA: 10mg/m ³	TWA: 15mg/m ³ total dust TWA: 5mg/m ³ respirable fraction (vacated) TWA: 10mg/m ³ total dust (vacated) TWA: 5mg/m ³ respirable fraction	TWA: 10mg/m ³ total dust TWA: 5mg/m ³ respirable dust
Titanium Dioxide	13463-67-7	TWA: 10mg/m ³	TWA: 15mg/m ³ total dust (vacated) TWA: 10mg/m ³ total dust	IDLH: 5,000mg/m ³
Glass, oxide	65997-17-3	TWA: 1 fibre/cm ³ respirable fibres TWA: 5mg/m ³ inhalable fraction		

* Data sourced from CCID.

† Data sourced from client provided SDS.

Engineering Controls

Ventilation: Ensure adequate ventilation.

Personal Protection (PPE)

Eyes/Face: Splash resistant Safety Glasses with side shields or safety goggles (AS/NZS 1337) may be worn.

Skin: Protective clothes and clothing should be worn. The material must be impermeable and resistance to the product.

Respiratory: If exposure limits are exceeded or irritation is experienced, respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations.

9. Physical & Chemical Properties

Appearance: White liquid

Odour: Light ammonia

pH: Not available

Boiling point: Not available

Density: 1,443g/L

Solubility (water): Not available

Specific gravity: 1.37

VOC Content: 19g/L

10. Stability & Reactivity

Stability: Stable under recommended storage conditions.

Conditions to avoid: Extremes of temperature and direct sunlight.

Hazardous decomposition products: None known

11. Toxicological Information

Health Effects / Symptoms of Exposure

Skin: Causes mild skin irritation.

Toxicological Data

Ingredient	CAS Number	Acute Toxicity Oral	Acute Toxicity Dermal
Ammonium Polyphosphate	68333-79-9	LD50: 4,740mg/kg (Rat) [†]	
Water	7732-18-5	LD50: >90mL/kg (Rat) [†]	
2,4,6-Triamino-1,3,5-triazine	108-78-1	LD50: 3,161mg/kg (Rat) [†]	LD50: >1g/kg (Rabbit) [†]
Pentaerythritol	115-77-5	LD50: 10,000mg/kg (Rat) [†]	
Titanium Dioxide	13463-67-7	LD50: >10,000mg/kg (Rat) [†]	
Nonylphenoxypolyethoxyethanol	127087-87-0	LD50: 1,310mg/kg (Rat)* [†]	

* Data sourced from CCID.

[†] Data sourced from client provided SDS.

12. Ecological Information

Persistence in environment: Not available

Mobility: Not available

Biodegradability: Not available

Ecotoxicological Data

Ingredient	CAS Number	Aquatic Toxicity*	Terrestrial Vertebrates Toxicity [†]
Ammonium Polyphosphate	68333-79-9	Fish: LC50: 500mg/L Brachydanio rerio (96 hour exposure) Fish: LC50: 123-1066mg/L Oncorhynchus mykiss (96 hour exposure) Fish: LC50: 389-654mg/L Pimephales (96 hour exposure)	
2,4,6-Triamino-1,3,5-triazine	108-78-1	Algae: EC50: 940mg/L Scenedesmus pannonicus (96 hour exposure) Fish: LC50: 3,000mg/L Poecillia reticulata (96 hour exposure) Crustacea: EC50: 2,000mg/L Daphnia magna (48 hour exposure)	
Pentaerythritol	115-77-5	Fish: LC50: 50,000mg/L Oryzias latipes (48 hour exposure) Crustacea: EC50: 30,477mg/L Daphnia magna (48 hour exposure) Crustacea: EC50: 38,900mg/L Daphnia magna (24 hour exposure)	
Nonylphenoxypolyethoxyethanol	127087-87-0		LD50: 1,310mg/kg (Rat)

* Data sourced from CCID.

[†] Data sourced from client provided SDS.

13. Disposal Considerations

Dispose of waste through a specialist waste disposal contractor. Do not reuse container.

14. Transport Information

Not classified as a Dangerous Good according to NZS 5433:2007.

Proper Shipping Name: Not available

Marine Pollutant: Not available

UN Number: Not available

15. Regulatory Information

HSNO Approval

Group Standard – Surface Coatings and Colourants (subsidiary Hazard) Group Standard 2017. HSR002670.

All ingredients are listed on the NZIoC.

16. Other Information

Abbreviations / Terminology:

AS/NZS 1337	Personal eye-protection
AS/NZS	Joint Australian New Zealand Standard
CAS#	Chemical Abstract Service number (a unique identifier for chemicals)
CCID	Chemical Classification and Information Database
HSNO	(New Zealand) Hazardous Substances and New Organisms Act
NZIoC	New Zealand Inventory of Chemicals
NZS 5433	Transport of Dangerous Goods on Land
WES	Workplace Exposure Standard

Prepared with reference to: *Preparation of Safety Data Sheets, Approved Code of Practice under the HSNO Act [COP 8-1]*, New Zealand Chemical Industry Council Sep 2006

Current Version: 12 December 2017

Revision Information:

SDS may be revised from time to time, please ensure you have a current copy.

This revision: Updated to meet New Zealand requirements.

Previous revision dated: 30 December 2014

Disclaimer:

This safety data sheet attempts to describe as accurately as possible the potential exposures associated with normal use of the product described herein. Health and safety precautions in the data sheet may not be adequate for all individuals and/or situations. Users have the responsibility to evaluate and use this product safely and to comply with all applicable laws and regulations.

Whilst the information contained in this document is based on data, which, to the best of our knowledge, was accurate and reliable at the time of preparation, no warranty or responsibility can be accepted by us for errors and omissions. The provision of this information should not be construed as a recommendation to use any of our products in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Since the information contained in this document may be applied under conditions beyond our control, no responsibility can be accepted by us for any loss or damage caused by any person acting or refraining from action as a result of this information.

--END OF SDS

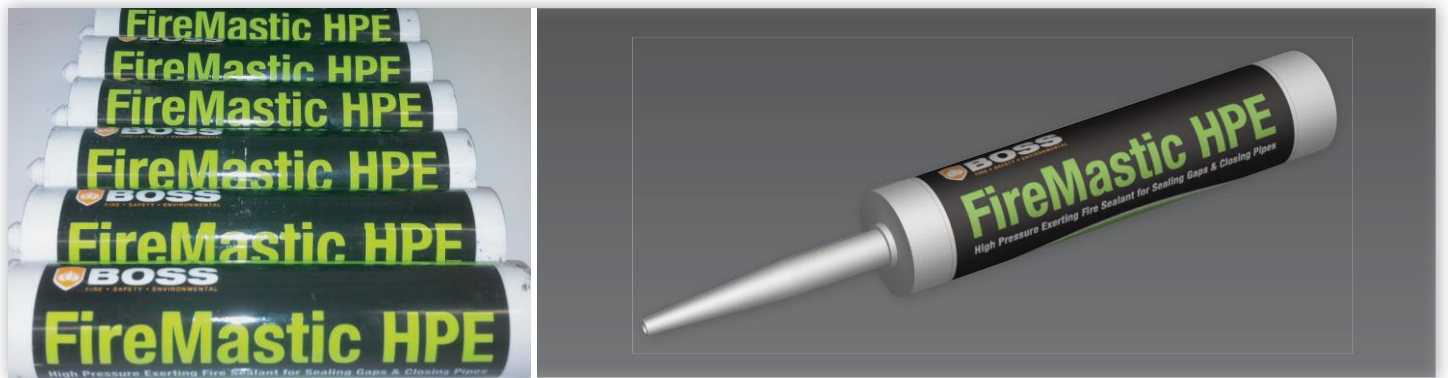


FireMastic-HPE

High Pressure Expanding Mastic

Advanced graphite-based intumescent sealant for closing of pipes, sealing of linear gaps and protecting penetrations from fire and smoke

Approved to AS1530.4:2005 and ISO 6944



Technical Data Sheet

KEY BENEFITS

- High pressure 40x expansion rate
- Closes down PVC and Rehau pipes
- 2 hours fire rating on cables and pipes
- Approved to be use on Armaflex lagging
- Approved on masonry, Hebel and plasterboard

INTRODUCTION



FireMastic-HPE is a graphite-based, thixotropic, one-part acrylic emulsion that is designed to resist the passage of fire and smoke. Under heat, FireMastic-HPE will expand with enough pressure to close PVC pipes and seal around cables and metal pipes to maintain the integrity and insulation performance of the seal, yet without placing any unnecessary pressure on the building substrate.

FireMastic-HPE is supplied in cartridges suitable for caulking via an applicator gun or also available in buckets. It has excellent non-slump properties coupled with the ease of application due to its water-based nature.

The sealant is intended for use in either linear gap seals or services penetrations through walls where fire integrity and insulation needs to be preserved. Under fire conditions the product expands up to 40 times its volume and exerts pressure to the surrounding substrates leading to closure of the penetration. The integrity and insulation is then maintained by the stability of the remaining product char.

PRODUCT APPLICATIONS & ADVANTAGES

- Sealing combustible and non-combustible penetrations.
- Sealing combustible pipes.
- Sealing around metal pipes with insulated lagging remaining on the pipe.
- Sealing of cables.
- Suitable for use in irregular applications.
- Excellent insulation properties.
- Easy clean up with water and odourless.
- Long life and paintable.
- Smoke, gas and water tight.
- Approved on a wide range of masonry, Hebel and plasterboard applications.

PHYSICAL PROPERTIES

Description	Aqueous thixotropic paste
Density	1.3g/cm ³
Colour	Grey
Application temperature	+5°C to 30°C
Expansion onset temperature	180°C
Expansion	Up to 40 times
Skin time	15 minutes @ 25°C/50%RH
Shelf life	18 months when unopened
pH	8 - 9
Testing	AS1530, EN1366

INSTALLATION

- Ensure the opening and any substrate which the product will come into contact with is clean, free from dust and loose particles.



- Use open cell foam backing rod to offer base support for Sealant to sit against.
- Sealant should be applied around the service(s) on both exposed faces where the seal width:depth ratio is 1:1.



- The sealant can be tooled and smoothed with a pallet knife using water.



- All dimensions and tolerances should be in line with the recommended guidelines as dictated by the relevant test data and assessments documents

APPROVED APPLICATIONS

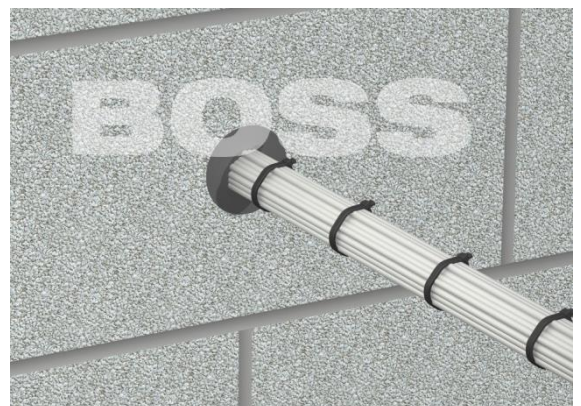
- Rehau / Cross-Linked Polyethylene (XLP)



- Insulated or Uninsulated Copper or Steel pipe



- Bundles of cables



SPECIFICATION

Approved to AS1530.4-2005 by CSIRO (report FCO2990/4227 and CSIRO report FSP1583)

Service	Seal / Penetration Size	Wall Type	Seal Size	FRL
120min Wall System:				
Copper pipes with Armaflex and insulated lagging	Pipe 15mm – 60mm dia Lagging up to 124mm dia	Plasterboard	15 x 24mm deep 20 x 24mm deep	-/120/120
Steel pipes with Armaflex and insulated lagging	Pipe 15mm – 60mm dia Lagging up to 124mm dia	Plasterboard	15 x 24mm deep 20 x 24mm deep	-/120/120
Copper pipes – uninsulated	15mm up to 60mm dia	Plasterboard	15 x 24mm deep 20 x 24mm deep	-/120/0*
Steel pipes – uninsulated	15mm up to 60mm dia	Plasterboard	15 x 24mm deep 20 x 24mm deep	-/120/0*
Copper pipes with Armaflex and insulated lagging	Pipe 15mm – 60mm dia Lagging up to 124mm dia	Masonry	15 x 24mm deep 20 x 24mm deep	-/120/120
Steel pipes with Armaflex and insulated lagging	Pipe 15mm – 60mm dia Lagging up to 124mm dia	Masonry	15 x 24mm deep 20 x 24mm deep	-/120/120
Copper pipes – uninsulated	15mm up to 60mm dia	Masonry	15 x 24mm deep 20 x 24mm deep	-/120/0*
Steel pipes – uninsulated	15mm up to 60mm dia	Masonry	15 x 24mm deep 20 x 24mm deep	-/120/0*
Copper pipes with Armaflex and insulated lagging	Pipe 15mm – 60mm dia Lagging up to 124mm dia	Aerated Concrete Block (Hebel)	15 x 24mm deep 20 x 24mm deep	-/120/120
Copper pipes with Armaflex and insulated lagging	Pipe 15mm – 60mm dia Lagging up to 124mm dia	Aerated Concrete Block (Hebel)	15 x 24mm deep 20 x 24mm deep	-/120/120
Copper pipes – uninsulated	15mm up to 60mm dia	Aerated Concrete Block (Hebel)	15 x 24mm deep 20 x 24mm deep	-/120/0*
Steel pipes – uninsulated	15mm up to 60mm dia	Aerated Concrete Block (Hebel)	15 x 24mm deep 20 x 24mm deep	-/120/0*
Linear Joint Seals	Up to 20mm wide Up to 120mm deep	Masonry to masonry Concrete to concrete Plasterboard-plasterboard Any combination above	20mm wide 25mm deep	-/120/120
Cables Bundled and insulated with: PVC EPR/PO XLPE/EVA	Bundled of 10 or less sheathed up to 5mm x 1.5mm ² Pairs up to 1mm x 95mm ² A1, A2, A3 or B cables	Plasterboard Masonry Concrete Block Hebel	Fill available void to 25mm deep	-/120/120

90min Wall System:

Plastic Pipes – Rehau Cross-Linked Polyethylene (XLP)	Pipe 20 – 25mm up to 63mm wall hole	Plasterboard Aerated Concrete Block (Hebel) Masonry	21.5 x 25mm deep 19 x 25mm deep	-/90/30
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60min Wall System:

HVAC Copper and PVC Conduit Paircoil Insulated copper pipes with cable inside PVC pipe	Copper paircoil 6.35mm and 9.52mm with insulation. 1.5mm ² 2C+E TPS cable 16mm dia PCV conduit	1hour plasterboard cavity wall All services clustered together	80mm dia hole 13mm deep seal	-/60/60
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*uninsulated metal pipe penetrations generally not required to have insulation criteria, as per BCA C3.15

SAFETY CAUTION

As FireMastic-HPE contains graphite to provide its high performance intumescence, it is therefore conductive of electricity. Caution is needed to ensure FireMastic-HPE does not come into contact with live current or electrically charged equipment as electric shock may occur. When using FireMastic-HPE to firestop around power cables, check to make sure that the cables' insulation is free from defects.

For more information on this please contact BOSS Fire & Safety Technical Services on 1300 502 677.

HEALTH AND SAFETY

To learn more about the safe handling of FireMastic-HPE, see the Material Safety Data Sheet available at www.bossfire.com.au or scan the 3D barcode below with a compatible QR Reader.

Scan here to view MSDS:



LIMITATION

BOSS Fire & Safety Pty Ltd has provided the above technical information in good faith and to be best of its knowledge. This information was deemed to be correct at the time of publication. Should any data come to BOSS Fire & Safety's attention relating to the fire resistance or performance of the product described, BOSS Fire & Safety reserve the right to amend this report.

BOSS Fire & Safety strive to constantly improve and developed products so this information may change without notice.

FURTHER TECHNICAL INFORMATION

For additional technical information on the performance of FireMastic-HPE or other BOSS products please contact our Technical Services team