

FIREPRO

FIRE PROTECTIVE BUILDING PRODUCTS

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CI/SfB

M706 DATASHEET – Apr 15

Product specifications can change. Contact us to ensure you have our latest datasheet

FIREPRO M706

Fire & Acoustic Intumescent Sealant



Firepro M706 sealant is a one-part fire-rated intumescent sealant formulated primarily to perform as a barrier to the incursion of fire around pipes and cables and through expansion joints. M706 is also an effective acoustic sealant.

M706 is recommended for sealing interior construction joints which are subject to movement (up to $\pm 20\%$) in concrete floors and concrete block walls, plasterboard, Hebel walls and brickwork.

Also for sealing gaps around cables, metal pipes, conduits, busways and ducts that penetrate fire rated walls. If joint movement is not required, M706 sealant can be used as a putty for filling holes in fire rated substrates such as metal, concrete, plasterboard, and cables.

ADVANTAGES

- Acoustic - maintains STC65.
- Fire rating for gaps up to 50mm depending upon joint type.
- Good flexible joint movement $\pm 20\%$.
- Paintable, when cured.
- One part - No mixing.
- Very easy to apply and gives a smooth finish.
- Low Odour.
- Non-toxic - contains no heavy metals such as antimony, cadmium, lead, or mercury.
- Contains no isocyanates.
- Asbestos free.
- Priming not normally required.
- Can be applied to damp surfaces.
- Water clean up.
- VOC 31 (g/l).

Property	Data
Colour	Grey
Appearance	Thick heavy paste
Specific gravity	1.5 \pm 0.1
Viscosity	1.0 - 1.2 million cP
Tack free time	@ 25°C 30 Minutes
Working time	@ 25°C 15 Minutes
Joint movement capability	$\pm 20\%$
Durometer (Shore A)	25 - 35
Service Temperature Range	-20 to +80°C

SURFACE PREPARATION

All surfaces must be clean, sound, and free from dirt, grease, or other contaminants. Ideally surfaces should be dry, but M706 will adhere to slightly damp surfaces.

Masking: Areas adjacent to joints may be masked to provide a neat finish. Masking should be removed immediately after tooling.

Priming: Should priming be needed to seal edges or increase adhesion, apply one brush coat of Express 290D primer and allow to dry before M706 application. In Hebel walls, first seal the joint or penetration, plus up to 30mm around the opening with Express 290D primer.

APPLICATION

All joints should be filled to required depth with a backer rod or bond breaker tape prior to sealant application. Some shrinkage may occur. Apply M706 sealant in required ratio of width to joints by bulk loading gun or similar method. Joint groove must be completely filled with sealant.

Time to cure is highly variable and depends on weather conditions, ambient temperature and depth of joint. Allow longer curing times in cold or damp conditions. Do not allow water contact until a thick surface has formed.

COVERAGE (Metre/Litre) CLEAN-UP

Joint Depth (mm)	Joint Width (mm)				
	10	20	30	40	50
10	10	5	-	-	-
15	-	-	2	1.6	-
20	-	-	-	1.25	1
25	-	-	-	-	0.8

After applying M706 sealant, clean all tools and metal surfaces with hot water while the sealant is still wet.

ACOUSTIC TESTING AND FIRE TESTING

See following two pages.

NOTE: The technical information and suggestions for use and application presented herein represent the best information available to us and are believed to be reliable. If used beyond the situations detailed on this datasheet we advise confirming their suitability before installation. All dimensions are nominal.

We reserve the right to make changes or to withdraw designs and products without notice.

Fire & Acoustic Sealant cont.

STANDARDS COMPLIANCE FIRE & ACOUSTIC

FIRE

Firepro M706 intumescent sealant has up to four hours fire integrity and up to 3 hours insulation when tested in accordance with AS1530:4 and AS4072:1. Fire rating periods will depend upon the quantity of M706 used, the substrate and the type of penetrating items if any.

Please refer to the Fire Test information set out on this datasheet.

ACOUSTIC TESTING

Firepro M706 has been tested and found to perform as an acoustic sealant, maintaining the STC of rating a wall with Sound Transmission Class (STC) 65.

LIMITATIONS

Do not apply when rain exposure is likely within 24 hours of application. Do not apply to wet surfaces.

M706 sealant may be used for interior and limited exterior sealing, (concrete and Hebel walls), in areas where ladder access or a building maintenance unit is available. It is not recommended for use in water retaining structures or where pooling may occur.

Our recommended Fire Rated Intumescent Sealant for external use is Firepro M707 which has been used internally and externally for over 20 years.

SAFETY

Non-flammable, Non-toxic, Non-hazardous but prolonged skin contact may irritate.

Wash hands after use with soap and water.

STORAGE & SHELF LIFE

Do not store containers below 5°C or above 25°C or in direct sunlight. When stored correctly in unopened containers, M706 Intumescent Sealant has a shelf-life of 12 months.

PACK SIZES: 300mm cartridges 600mm sausages 10 Litre pails.

COMPLEMENTARY PRODUCTS

See Data Sheets on website for Firepro M707, M708 and M797.

FIRE TESTING

FLOOR FIRE TESTS

Joints in concrete floors can be fire protected using M706 for joints up to 20mm wide and a minimum of 10mm deep, for wider joints up to 50mm wide and 20mm deep.

Tested through a standard 120mm thick floor to AS1530:4 and AS4072 as follows:

- 50mm wide x 20mm deep sealed on fire side of slab only - / 240 / 60
- 50mm wide x 20mm deep sealed on both sides of slab - / 240 / 120
- 20mm wide x 10mm deep sealed on fire side of slab only - / 240 / 120
- 20mm wide x 10mm deep sealed on both sides of slab - / 240 / 120

WALL FIRE TESTS

M706 is suitable for concrete and gypsum plasterboard walls. Tested to AS1530:4 and AS4072:1 as follows:

- Plasterboard - 20mm wide gap at top of wall with 16mm deep M706 both sides of wall - / 180 / 120
- Plasterboard - 6mm fillet at bottom of wall to outer of 2 layers of 16mm board on both sides of wall - / 180 / 180
- Plasterboard wall joint 16mm x 16mm M706 to both sides of wall - / 180 / 120
- Plasterboard wall control joint 15mm wide x 20mm deep M706 on both sides of wall - / 180 / 180
- Concrete block joint 30mm wide x 15mm deep non-fire side wall - / 180 / 60
- Concrete block joint 10mm wide x 5mm deep non-fire side wall - / 180 / 180
- Hebel wall panel joint 20mm wide x 10mm deep both sides of wall - / 180 / 180
- Hebel joint plus up to 30mm around the opening primed with Express 290 primer before M706 application.

**Metal Pipes, Electrical and Communication Cables
Fire Tests - refer next page**

Fire & Acoustic Sealant cont.

METAL PIPE FIRE TESTING

In addition to the tested pipe situations below Firepro has a wide range of other fire tested solutions for plastic and metal pipes. Some use M707 or M708 sealant, some pipe wraps, collars or sleeves.

Refer to B109, B302, B311, B312, B314 and B315 data sheets.

M706 Intumescent Sealant was tested in accordance with AS1530.4 and AS4072.1

Seal around pipes on both faces of wall.

Copper Pipe 150mm ID Gypsum Plasterboard Wall -/90/-. Seal 50 x 50mm cone of M706.

Copper Pipe 100mm ID Hebel Wall -/180/-. Seal 50 x 50mm cone of M706 plus 10mm into joint.

Copper Pipe 100mm ID Concrete Wall -/180/14. Seal 25mm x 25mm cone of M706 plus 20mm into hole.

Brass Pipe 100mm dia. in a Gypsum Plasterboard Wall . -/90/30. Seal 50mm x 50mm cone of M706.

Steel Pipe 22mm ID in Hebel Wall -/180/180. Seal 30mm x 30mm cone plus 10mm into joint.

Steel Pipe 32mm ID in Hebel Wall -/180/180. Seal 50mm x 50mm cone plus 10mm into joint.

Steel Pipe 80mm ID in Hebel Wall -/180/180. Seal 50mm x 50mm cone plus 10mm into joint.

CABLES (See also M707 & M708 Datasheets).

"The test results on the standard configurations specified in Appendix D may be applied to all PVC-insulated and sheathed power and communications cables with copper conductors". AS1530.4-2005 Section 10.11.4.

Appendix D:

"Group A: Cable Configurations for Evaluation of PVC Insulated Power Cables.

1x single core PVC sheathed 127mm x 2.5mm

1x 3 core PVC sheathed 37mm x 2.5mm

3x 3 core PVC sheathed 7mm x 1mm

8x 3 core PVC sheathed 7mm x 1.7mm

Group B: Cable Configuration for Evaluation of Large Bundles of Telecommunication Cables

(a) Pack of 60 (10 x 6) 50 pair telecommunication cables.

(b) 100 wires, each wire, OD 0.5mm."

The following systems have been fire-tested to AS1530:4 using the standard configurations as set out in section 10.11.4 and AS4072:1 on Gypsum Plasterboard, Concrete, and Hebel Walls.

Note: Cable trays avoid damage to gypsum plasterboard walls that could occur with unsupported cables in a fire.

(1) Gypsum Plasterboard Systems

This test had to be stopped at 98 minutes because of danger from the wall collapsing in an area away from the penetrating items. The penetrations protected by M706 were not showing any signs of failure.

M706 Firesound sealant was applied to all sides of the cable tray and exposed cables to a cone 50mm along the cable/cable tray and 50mm across the face of the board. The sealant was applied on both sides of the wall.

(a) Communication Cables

As per the test standard 60 x 50 pair telecommunication cables (10 x 6) were tested on a low steel cable tray with the sealant around 3 sides of the cable bundle measuring approximately 90mm high and also under the cable tray. FRL -/90/90.

(b) Electrical Cables

The standard configuration of cables on a tray as set out in AS1530.4 & AS4072:1 was tested. FRL -/90/90.

(2) Concrete Wall

Telecommunication Cables tested in similar configuration to the Gypsum Plasterboard Wall tested above, but in addition to the 50mm x 50mm cone of M706, the sealant also goes 20mm into the wall. A backing strip is used to ensure that the depth is a minimum of 20mm on both sides of the wall. FRL -/180/90.

Power Cables tested in similar configuration to the gypsum plasterboard fire test except that there is the addition of a 40mm deep seal of M706 Firesound into the concrete on both sides of the wall. The cone of M706 may be reduced from 50mm x 50mm to 25mm x 25mm. FRL -/181/118.

(3) Hebel Walls

Single telecommunication cable in 40mm hole sealed with a 30mm x 30mm cone of M706 that also goes 10mm into the Hebel wall joint. The sealant is applied to both sides of the wall.

Telecommunication Cables Bundle and Power Cables tested in similar configuration as the wall board test above, as per the standard with a 50mm x 50mm cone of M706 plus 10mm into the wall. Sealed on both sides of the wall. FRL -/181/118.

Note: On Hebel walls prime the Hebel 10mm into the penetration and up to 30mm around the opening with Express 290D.