



3M™ Fire Barrier Moldable Putty Pads MPP+

Product Data Sheet

1. Product Description

3M™ Fire Barrier Moldable Putty Pads MPP+ are a one-part, ready-to-use, intumescent wall-opening protective. When properly applied to the back of electrical outlet boxes, 3M™ Fire Barrier Moldable Putty Pads MPP+ help control the spread of fire, smoke and noxious gases through fire-restive walls and partitions. Installed in accordance with the UL wall-opening protective listing (UL Category CLIV), the product helps achieve up to 2-hour ratings in a variety of wall constructions. 3M™ Fire Barrier Moldable Putty Pads MPP+ can effectively provide protection for back-to-back electrical boxes.

3M™ Fire Barrier Moldable Putty Pads MPP+ are also used as a firestop material in through-penetration fire-stop systems. 3M™ Fire Barrier Moldable Putty Pads MPP+ help to maintain a firestop penetration seal for up to 4 hours. 3M™ Fire Barrier Moldable Putty Pads MPP+ exhibit excellent adhesion to a full range of construction substrates and penetrants. The pads are easily molded by hand (no mixing required). In addition to its fire-resistant properties, the 1/10th in. (2.54 mm) thick pads have airborne sound reduction characteristics which helps minimize sound transmission through assemblies requiring an STC rating.

Color: ■ Dark Red

Product Features

- Firestop tested up to 4 hours in accordance with ASTM E 814 (UL 1479) & CAN/ULC S115
- Wall opening protective tested up to 2 hours in accordance with UL 263
- Provides draft and cold smoke seal
- Pliable and conformable—molds easily into required shape
- Helps reduce noise transfer*
- Tested in accordance with A.S.1530-4-2005
- Assessed in accordance with A.S.4072.1 – 2005
- EWFA Report No. RIR 23261
- Excellent adhesion
- Re-enterable/repairable
- Halogen-free and solvent-free
- Excellent aging properties
- Low VOC
- Will not dry out or crumble
- Red color widely recognized as a fire protective product

Meets the intent of LEED® VOC regulations—helps reduce the quantity of indoor air contaminants that may be odorous, irritating and harmful to the comfort and well-being of the installers and occupants.

**Minimizes noise transfer—STC-Rating of 52 when tested in STC 53-rated wall assembly.*



4 in. x 8 in. (101.6 mm x 203.3 mm),
7 in. x 7 in. (177.8 mm x 177.8 mm) and
9.5 in. x 9.5 in. (241.2 mm x 241.3 mm)
pad sizes available.

2. Applications

4 in. x 8 in. (101.6 mm x 203 mm) 3M™ Fire Barrier Moldable Putty Pads MPP+ are typically used as a wall opening protective to meet building requirements, for protection of membrane penetrations made by listed steel or non-metallic electrical boxes. It is also used to seal gaps between cables in multiple penetrations (including fiber optic inner duct) and to firestop cable bundles, insulated pipe, electrical conduit and metal pipe. Larger sized pads, 7 in. x 7 in. and 9.5 in. x 9.5 in. (177.8 mm x 177.8 mm and 241.2 mm x 241.2 mm) are widely used to firestop metallic and non-metallic electrical outlet boxes up to 14 in. x 4.5 in. by 2-1/2 in. (355.6 mm x 114.3 mm x 63.5 mm) deep. For larger applications, pads can be molded together by hand.

3. Specifications

3M™ Fire Barrier Moldable Putty Pads MPP+ shall be a one component, ready-to-use, intumescent elastomer capable of expanding a minimum of 3 times at 1000°F. The material shall be thixotropic and shall be applicable to overhead, vertical and horizontal firestops. Under normal conditions, 3M™ Fire Barrier Moldable Putty Pads MPP+ shall be noncorrosive to metal and compatible with synthetic cable jackets. The putty shall be listed by independent test agencies such as UL, Intertek or FM. 3M™ Fire Barrier Moldable Putty Pads MPP+ shall be tested to and pass the criteria of ASTM E 814 (UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems and CAN/ULC S115 Standard Method of Fire Tests of Firestop Systems. 3M™ Fire Barrier Moldable Putty Pads MPP+ meets the requirements of the IBC, NFPA 5000, NEC (NFPA 70), NFPA 101 and NCB (Canada) Building Codes.

Typically Specified MasterFormat (2004)

Section 07 84 00 – Firestopping

Related Sections

Section 07 84 16 – Annular Space Protection

Section 07 86 00 – Smoke Seals

Section 07 87 00 – Smoke Containment Barriers

Section 07 27 00 – Thermal and Moisture Protection Firestopping

Section 21 00 00 – Fire Suppression

Section 26 00 00 – Electrical

FIRE BARRIER UP TO 4 HOUR Fire Protection	SMOKE SEAL L RATED Meets Optional L Requirements
WALL OPENING UP TO 2 HOUR Fire Protection	SOUND BARRIER STC 52 In STC 53-Rated Wall Assembly



SUBJECT TO THE CONDITIONS OF APPROVAL
AS A WALL & FLOOR PENETRATION
FIRESTOP WHEN INSTALLED AS DESCRIBED
IN THE CURRENT EDITION OF THE FMRC
APPROVAL GUIDE



LISTED
FILL, VOID OR CAVITY
MATERIALS
90G9



CLASSIFIED
WALL OPENING PROTECTIVE
MATERIAL FIRE RESISTANCE
CLASSIFICATION SEE UL FIRE
RESISTANCE DIRECTORY
90G9



CLASSIFIED
FILL, VOID, OR CAVITY
FOR USE IN THROUGH-PENETRATION
FIRESTOP SYSTEMS
SEE UL FIRE RESISTANCE DIRECTORY
90G9

4. Performance & Typical Physical Properties

Color:	Dark Red	STC (ASTM E 90, ASTM E 413):	52 when tested on back-to-back electrical boxes
Nominal Density:	10-12 lbs./gal. (1.2-1.45 kg/l)	Tested in STC 53 rated wall assembly	
Nominal Thickness:	1/10 in. (2.54 mm)	VOC Less H₂O and Exempt Solvents:	<250 g/L
Surface Burning (ASTM E 84):	Flame Spread 0, Smoke Development 0		
Heat Expansion:	Begins @ 350°F (177°C), Significant @ 400°F (204°C) Free Expansion is Nominal 3 times		
Dimensions:	4 in. x 8 in. x 1/10 in. (101.6 mm x 203.2 mm x 2.5 mm)	7 in. x 7 in. 1/10 in. (177.8 mm x 177.8 mm x 2.5 mm)	9.5 in. x 9.5 in. 1/10 in. (241.3 mm x 241.3 mm x 2.5 mm)
Unit Volume:	2.52 in. ³ (41.4 cm ³)	4.63 in. ³ (76.0 cm ³)	6.1 in. ³ (139.8 cm ³)
Unit weight:	2.7 oz (76 g)	4.1 oz (76 g)	7.6 oz (215 g)

5. Packaging, Storage, Shelf Life

Packaging	Corrugated cardboard box with liner between individual pads.
Storage	3M™ Fire Barrier Moldable Putty Pads MPP+ should be stored indoors in dry conditions.
Shelf Life	3M™ Fire Barrier Moldable Putty Pads MPP+ shelf life is indefinite in original unopened containers. Product will not dry or crumble in opened containers. Normal stock and stock rotation practices are recommended.

6. Installation Techniques

Consult a 3M Authorized Fire Protection Products Distributor / Dealer or Sales Representative for Applicable UL, Intertek or other third-party drawings and system details.

Preparatory Work	The surface of the electrical box, or opening and any penetrating items should be cleaned (i.e. free of dust, grease, oil, loose materials, rust or other substances) to allow for the proper adhesion of the 3M™ Fire Barrier Moldable Putty+ Pad. Ensure that the surface of the substrates are not wet and are frost-free.
Installation Details	Electrical boxes must be firestopped under the following conditions: boxes larger than 16 sq. in. (103 sq. cm), if horizontal spacing between boxes is less than 24 in. (609.6 mm), when multiple boxes are located in one stud cavity or if the aggregate area of all boxes exceeds 100 sq. in. per 100 sq. ft. (645 sq. cm. per 9.29 sq. m) - refer to listed system details and applicable local building code requirements. For electrical box installations, a minimum of 1/10 in. (2.5 mm) thick putty application is required, 3M™ Fire Barrier Moldable Putty Pads MPP+ are to be installed to completely cover the exterior of the outlet box (except for the side against the stud). To firestop penetrations, install the applicable depth of backing material (if required), remove the desired amount of putty from the pad, form (if necessary) and install as detailed within the listed system. Make sure that putty is in complete contact with the substrate and penetrating item(s). Note: Partial pads can be pieced together and the seams between partial pads should overlap a minimum of 1/8 in. with the seams worked with the fingertips to create adhesion at the seam.
Limitations	Over application (i.e. using excessive amount of material) of product to vertical surfaces may cause sagging, follow system details. Product is not impaired by freezing but should be warmed to 32°F (0°C) before applying.

7. Maintenance

No maintenance is expected when installed in accordance with the applicable UL, Intertek, FM or other third-party listed system. Once installed, if any section of the 3M™ Fire Barrier Moldable Putty Pad MPP+ is damaged, the following procedure will apply: remove damaged putty, clean the affected area and install the proper thickness of putty, ensuring it bonds to the substrate and adjacent putty (product from damaged area can be reused if it is free from contaminants). Putty can be molded together at new/existing putty overlap.

8. Availability

3M™ Fire Barrier Moldable Putty Pads MPP+ are available from 3M Authorized Fire Protection Products Distributors and Dealers. 3M™ Fire Barrier Moldable Putty Pads MPP+ are available in the following sizes: (10 pads/pack, 10 packs /case) 4 in. x 8 in. x 1/10 in. (101.6 mm x 203.2 mm x 2.5 mm), (20 pads/case) 7 in. x 7 in. 1/10 in. (177.8 mm x 177.8 mm x 2.5 mm), (20 pads/case) 9.5 in. x 9.5 in. 1/10 in. (241.3 mm x 241.3 mm x 2.5 mm); red-colored firestop material. For additional technical and purchasing information regarding this and other 3M Fire Protection Products, please call: 1-800-328-1687 or visit www.3m.com/firestop.

9. Safe Handling Information

Consult product's Material Safety Data Sheet (MSDS) from country of use prior to handling and disposal.

Important Notice to User:

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty and Limited Remedy: 3M warrants that each 3M Fire Protection Product will be free from defects in material and manufacture for 90 days from the date of purchase from 3M's authorized distributor. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted.



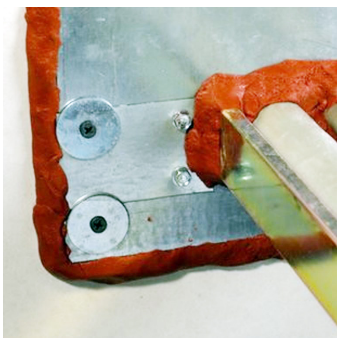
3M™ Fire Barrier Moldable Putty+ Product Description

The 3M Fire Barrier Moldable Putty+ consists of a synthetic elastomer designed for use as a one part, intumescent fire resistive putty used to restore the integrity of fire rated building construction.

Moldable Putty+ achieves up to a 4 hour Fire Resistance Rating when tested in accordance with AS1430.4. This is achieved by the unique intumescent (expanding when heated) and high strength insulating char-forming properties of this material.

Product Features

- Halogen-free formula: Free from corrosive gases during a fire, making it safe for building occupants and sensitive electrical equipment.
- Minimal odour
- Long shelf life: Stix and pad packages can be sealed for reuse. Putty will not dry out or crumble
- Easily re-enterable
- Provides a draft and cold smoke seal in the installed condition, even before any temperature rise occurs, resulting from a fire
- Adheres to all common building surfaces (cement, gypsum, wood and plastic), including metal and plastic electrical boxes
- One part, solventless pads or stix are easily hand molded, with no damming required, allowing easy application
- Intumescent: expands when heated, forming a hard char, preventing the transmission of hot gases and fire
- No special tools required
- Contains no asbestos, non toxic
- Testing in accordance with AS1530.4, EN1366, and ASTM E814 (UL Listed).
- Tested in accordance with A.S.1530-4-2005
- Assessed in accordance with A.S.4072.1 – 2005
- EWFA Report No. RIR 23261



3M Moldable Putty + Stix - Application



Physical Properties

Typical Physical Properties	Value
Colour	Red-Brown
Density	1.20-1.45 kg/l (10-12 lbs/gal)
Adhesion	Good on all construction substrates

Heat Expansion		
Begins	177°C (350°F)	
Significant	204°C (400°F)	
Free Expansion	Normal	3 times

Test Condition	Temperature	Humidity	Time	Normal Expansion
Oven	80°C (176°F)	–	90 days	2.7 Times
Humidity Chamber	32°C (90°F)	90 Percent	90 days	2.6 Times

Weight	
178 mm x 178 mm Pad (7" x 7")	103 gm (3.63 oz.)
40.6 mm dia. x 279 mm Stix (1.6" x 11")	491 gm (17.30 oz.)

Availability

3M™ Fire Barrier Moldable Putty+ is available from Authorized 3M Fire Protection Products Distributors.

3M Order Code	Packing	Unit/Case
98040055240	178 mm x 178 mm (7" x 7")	20

Maintenance

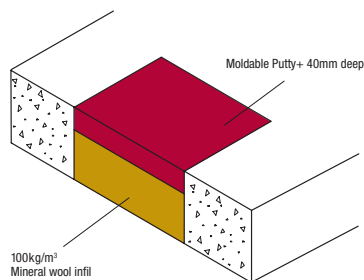
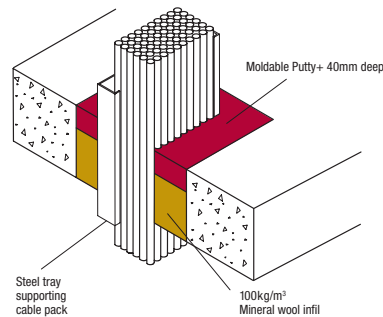
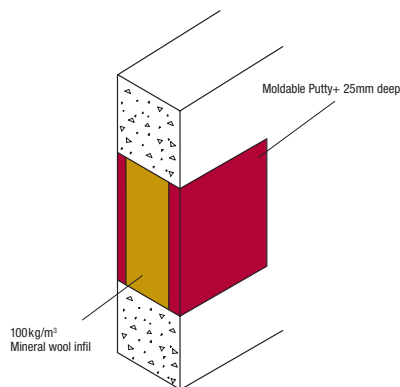
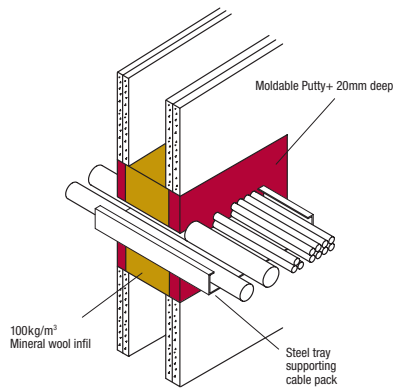
Moldable Putty+ is stable under normal storage conditions. Normal stock and stock rotation practices are recommended. This product is not impaired by freezing; however, it should be warmed to at least 0°C (32°F) before applying.

Installation Techniques:

Installation Techniques: Walls

Electrical Cables, Blank (unpenetrated) Seals

- Install 100kg/m³ mineral wool infill friction fitted and centred in the penetration. Ensure that enough space is left on either side of the mineral wool for the Moldable Putty+.
- Install Moldable Putty+ to a depth of 20mm for electrical cables and 25mm for blank unpenetrated seals on both sides of the wall. It is usually easiest to mold the Putty into place one section at a time. Ensure that the Moldable Putty+ is installed flush with the wall on both sides of the penetration.



Installation Techniques: Floors

Electrical Cables, Blank (unpenetrated) Seals

- Install 100kg/m³ mineral wool infill friction fitted into the floor slab, the bottom of the mineral wool should be flush with the bottom surface of the floor slab. Ensure that enough space is left above the mineral wool for the Moldable Putty+.
- Install Moldable Putty+ to a depth of 40mm on the top side of the floor slab only. It is usually easiest to mold the Putty into place one section at a time. Ensure that the Moldable Putty+ is installed flush with the top surface of the floor slab.

Performance Specifications for Installers

Australian Standard FRLs		Fire Resistance Level (FRL)		
3M Fire Barrier System	Building Element	Blank (Unpenetrated) Seal	Mixed PVC Insulated Cables, Cable trays and Cable bundles	For Telecommunication Cables, Cable trays and Cable bundles only
	Floor: Concrete slab. <i>Minimum 120mm thickness</i>	-/240/120	-/180/-	-/240/30
3M Fire Barrier Moldable Putty+	Wall: Plasterboard Dry Wall, solid masonry, hollow masonry or concrete construction. <i>Minimum 116mm thickness</i>	-/120/120	-/120/30	-/120/30
	Wall: Solid masonry, hollow masonry or concrete construction. <i>Minimum 150mm thickness</i>	-/240/180	-/120/30	-/120/30



In order to achieve the above FRLs you must ensure that the Moldable Putty+ is installed as per the Installation Techniques and the building element you are installing into has an FRL performance equal to or better than that of the Moldable Putty+ system. The Installation Techniques can be found on the final page of this document.

What does FRL mean?

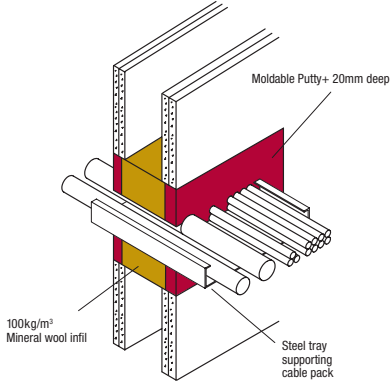
FRL stands for 'Fire Resistance Level'. For example, an FRL of '-/240/180' indicates:

- **Structural Adequacy.** The first dash '-' indicates that Moldable Putty+ is non load bearing
- **Integrity.** The middle number '240' indicates for how many minutes the Moldable Putty+ system can resist the passage of flames and hot gasses
- **Insulation.** The last number '180' indicates how many minutes it takes the unexposed face to heat up by more than 140°C.

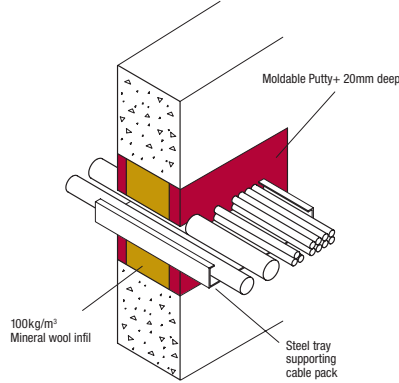
Performance Specifications for Engineers and Specifiers

3M Fire Barrier Moldable Putty+ has been tested in accordance with AS1530.4-2005 and assessed in accordance with AS4072.1-2005 under BWA Report No: 23261. The following illustrations provide a summary of the test results for D1 and D2 cable configurations and blank unpenetrated seals with Moldable Putty+ installed as per the Installation Techniques. Specifications for standard D1 and D2 cable configurations can be found in AS1530.4-2005 Appendix D.

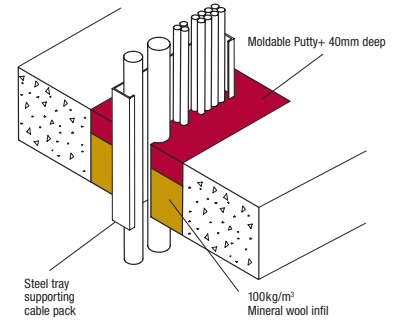
D1 Cable Pack – Power Transmission Cables.



Dry Wall 116mm – FRL: -/180/30

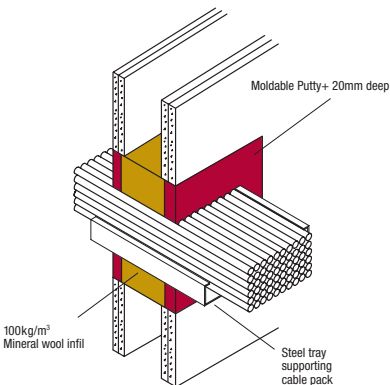


Solid Masonry, Hollow Masonry or
Concrete Wall 116mm – FRL: -/180/30

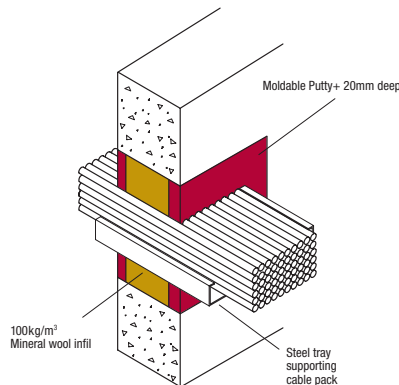


Concrete Floor 120mm – FRL: -/180/-

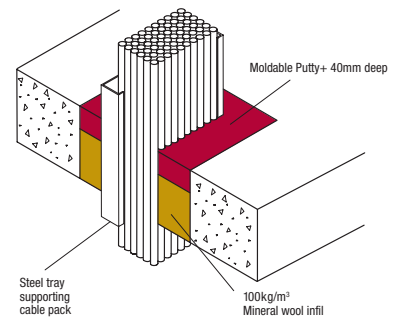
D2 Cable Pack – Telecom Cables.



Dry Wall 116mm – FRL: -/120/30

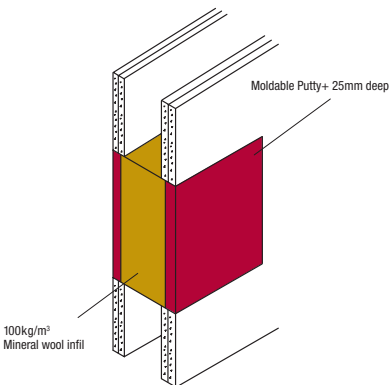


Solid Masonry, Hollow Masonry or
Concrete Wall 116mm – FRL: -/120/30

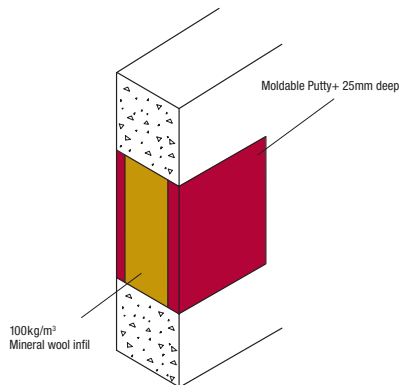


Concrete Floor 120mm – FRL: -/240/30

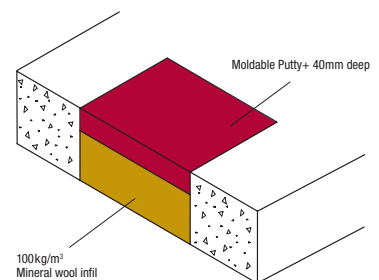
Blank Openings (unpenetrated)



Dry Wall 116mm – FRL: -/120/120



Solid Masonry, Hollow Masonry
or Concrete Wall :
116mm - FRL: -/120/120
150mm - FRL: -/240/180
170mm - FRL: -/240/240



Concrete Floor :
120mm - FRL: -/240/120
150mm - FRL: -/240/180
170mm - FRL: -/240/240