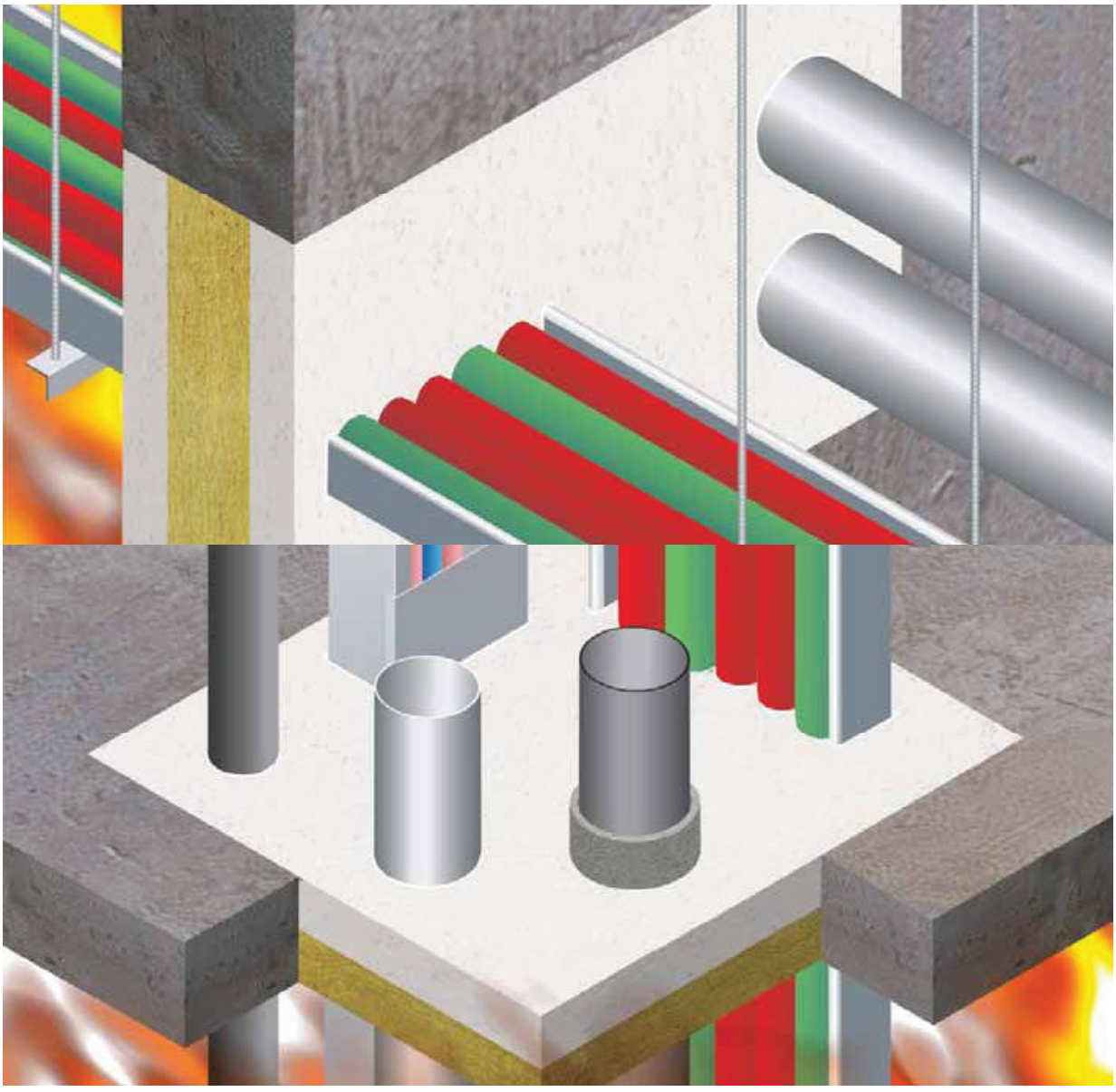
Promat

PROMASTOP[r] Cement
Penetration seals



Description

A fire resistant, light weight cement supplied as a pre-mixed dry powder for mixing on site with water. This cement is white in colour for ease of identification and provides up to a 4 hour fire rating in masonry or concrete block walls and concrete floors when installed as per the instructions on the bag and on the reverse side of this data sheet.

INSULATION on the penetrating services will vary depending upon the services that penetrate the barrier. PROMASTOP® Cement is fire tested to BS 476: Part 20 and AS 1530: Part 4, with reference to prEN 1366: Part 3: 1999.

For best surface finish use 2 : 1.33 (cement : water).

Feature Advantages

- Tested in floors and walls.
- Economical thin application.
- Quick setting.
- Non-shrinking.
- Readily drilled or penetrated for post installation of services.
- Easy to mix to various consistencies.
- Hard surface finish.

Packaging

PROMASTOP® Cement is supplied in 22kg bags, blended ready for mixing with clean water.

Store in dry conditions. Shelf life 12 months in an unopened bag.

Technical Properties

Density (powder): 730kg/m^3.

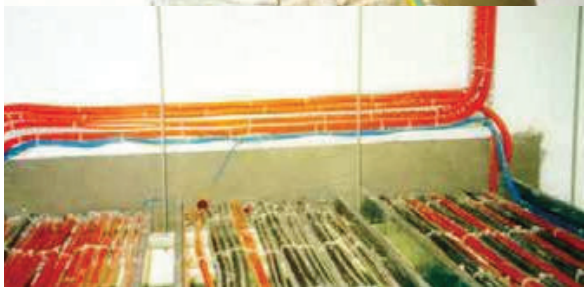
2 litres of powder mixed with 1 litre of water =
Approximately 1.66 litres of mix.

Workability period = 30 minutes from time of mixing*.

Hardened within approximately 60 minutes*.

Penetrating services include plastic pipes, steel pipe, cables and cable tray and cable trunking.

*Setting and workability times will depend upon the amount of water used, the cleanliness of the water and the climatic conditions.



Mixing Instruction

When mixed with 15 to 19 litres (kg) of clean water, the bag will produce approximately 25 litres of mix which will fill an area approximately 0.63m^2 at 40mm deep or 0.42m^2 at 60mm deep.

This equates to approximately 1.6 x 22kg bags per m^2 of clear opening at 40mm deep or 2.4 x 22kg bags at 60mm deep (other usage depths can be calculated directly from these figures). The final yield will depend upon the volume of water used. The figures given in this data sheet are for guidance only.

PROMASTOP® Cement can be mixed to a consistency to suit the application. For floors, if services are close together, a wetter, pouring mix is preferable. For walls, it is always preferable to use a dry, packing mix. The amount of water used will also depend on the weather conditions at the time, but do not use a ratio of less than 2:1. The following may be used as a guide:

Pourable mix: 1.8 litres of water to 2kg of compound.
Packing mix: 1.35 litres of water to 2kg of compound.

The mix will remain useable for approximately 30 minutes but this will depend upon the weather conditions and amount of water used. DO NOT attempt to remix by adding water after setting has commenced.

In some applications it may be necessary to provide bond breakers around services that may move as a result of natural building or thermal movement. This can be achieved using PROMASEAL® IBS or plastic film wrap. Always apply a bead of PROMASEAL® Acrylic Sealant at the junction of the services and PROMASTOP® Cement. This provides a smoke, water and movement seal.

Installation

1. Floors

   Install 50mm thick x 120kg/m^3 mineral wool positioned such that the top of the PROMASTOP® Cement will be flush with the top surface of the floor slab. The maximum size of opening without the need to provide joints in the system is 1500mm x 600mm. It may be necessary to use temporary support for the mineral wool. The mineral wool forms part of the system and MUST NOT BE REMOVED. Add PROMASTOP® Cement to the depth required to achieve the desired fire resistance as follows:

1 hour	2 hours	3 hours*	4 hours*
40mm	50mm	60mm	70mm

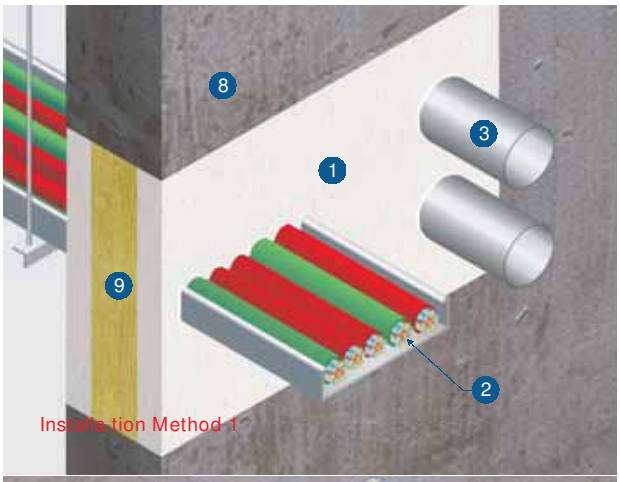
   Cut the mineral wool to ensure that the rockwool formwork is tightly fitted within the aperture, otherwise temporary support for the rockwool is required. This is to prevent the wet cement from collapsing with the rockwool due to its weight when the cement is poured onto the rockwool. For cable penetrations it is essential to liberally apply PROMASEAL® Acrylic Sealant between the cables where they are bunched and along their length where they pass through the mineral wool formwork and the full depth of PROMASTOP® Cement.

   Apply a bead of PROMASEAL® Acrylic Sealant on the top side of the mineral wool, at the junction of the mineral wool and slab and around all service penetrations. Apply a bead of PROMASEAL® Acrylic Sealant on the top side of the PROMASTOP® Cement, at the junction of the PROMASTOP® Cement and slab and around all service penetrations.

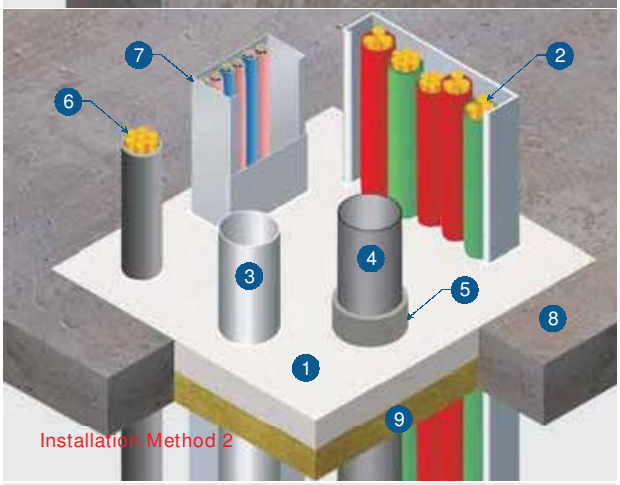
   *Additional zed brackets made from 30mm x 50mm x 30mm x 1.0mm zinc annealed steel are required at nominal 300mm centres around the perimeter of the opening, to add support to the cement.

Continued on opposite page

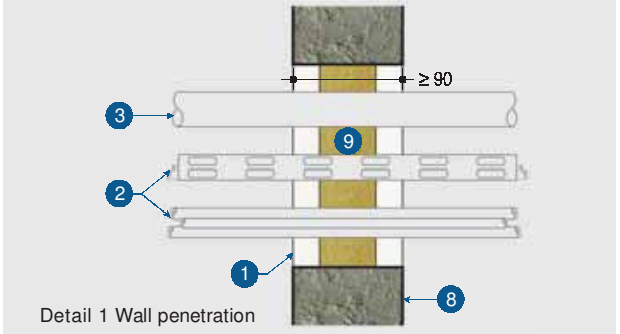
PRECAUTIONS TO USE THE PRODUCT (LEFT):
Goggles, a suitable dust mask and gloves should be worn during mixing and application. Before using, read and follow the Health & Safety Data Sheet. This is available upon request.



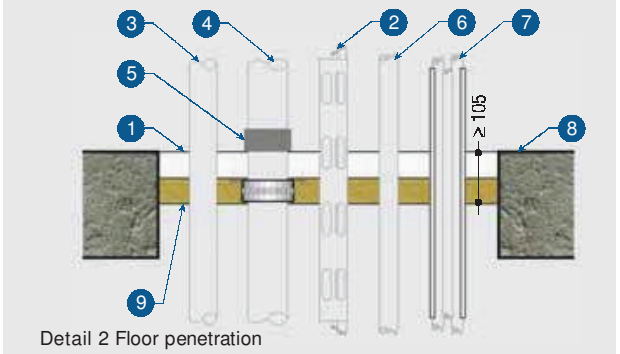
Installation Method 1



Installation Method 2



Detail 1 Wall penetration



Detail 2 Floor penetration

2. Walls

Install 50mm x 140kgs/m³ mineral wool in the centre of the wall. The maximum size of wall opening without the need to provide support of joints in the system is 600mm x 200mm. The wall must be designed so that any construction above the opening is self-supporting, i.e. it does not impose any load onto the penetration seal.

The system is not for use in lightweight steel stud partition walls. Where hollow blocks or cavity wall systems are used, the cavities must be backfilled all round with PROMASTOP® Cement or a mortar mix. Add 25mm thick PROMASTOP® Cement to both sides of the mineral wool, to achieve a 4-hours fire resistance (FRL -240/180).

To provide an insulated barrier system increase the thickness of PROMASTOP® Cement to 50mm on both sides of the wall (FRL -240/240).

Cut the mineral wool to ensure it is a tight fit within the opening and around all services. For cable penetrations it is essential to liberally apply PROMASEAL® Acrylic Sealant between the cables where they are bunched and along their length where they pass through the mineral wool formwork and the full depth of PROMASTOP® Cement.

Apply a bead of PROMASEAL® Acrylic Sealant on both faces of the mineral wool at service penetrations and at the junction of the mineral wool and wall before installing the PROMASTOP® Cement. After the PROMASTOP® Cement has been installed, at the junction of the PROMASTOP® Cement and wall and around all service penetrations on both faces of the wall, apply a bead of PROMASEAL® Acrylic Sealant.

TECHNICAL DATA

4 hours fire rating, integrity in accordance with the criteria of BS 476: Part 20 and AS 1530: Part 4. Insulation achieved will be dependent upon the building element and type of services.

1. PROMASTOP® Cement
   Wall penetration = 25mm PROMASTOP® Cement + 50mm x 140kg mineral wool + 25mm cement
   (FRL -/240/180. For FRL -/240/240 use 50mm of PROMASTOP® Cement in lieu of 25mm.)
   Floor penetration = PROMASTOP® Cement (depth per table on opposite page) + 50mm x 120kg mineral wool
2. Electric cables and cable tray
3. Metal pipe
4. Plastic pipe with PROMASTOP® UniCollar® mounted flush with underside of mineral wool
5. Mound of PROMASEAL® Cement
6. Armoured cable
7. Cable trunking and cables with PROMASEAL® Electrical Junction Seal or IBS
8. Wall element or floor slab
9. Mineral wool as in 1

NOTE: Load bearing tests have been carried out on PROMASTOP® Cement. An unpenetrated floor opening of size 1000mm x 500mm, with 100mm thick reinforced PROMASTOP® Cement achieved a FRL of -/360/360 after which it successfully supported a load of 1000kg.

An unpenetrated floor opening of size 1000mm x 600mm, with 50mm mineral wool and 40mm thick unreinforced PROMASTOP® Cement successfully supported 7.56KN and a 70mm thick unreinforced PROMASTOP® Cement supported 10.21KN (non fire tested, non penetrated specimen). Due to the likelihood of building movement, Promat recommend that on unreinforced floor systems, warning signs are placed upon the system. A steel plate or similar should be placed over the system if foot traffic is possible.

Load Bearing Capabilities

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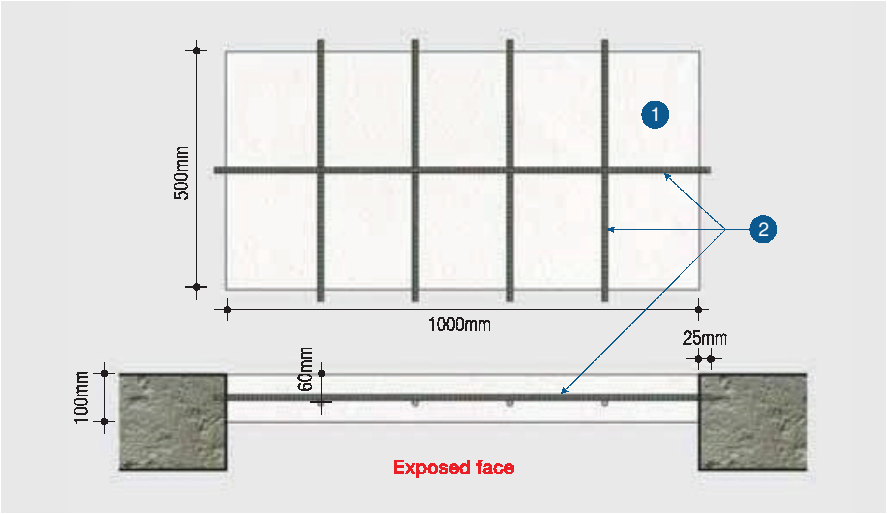

1. PROMASTOP® Cement
2. Reinforced bars 12mm diameter steel

If the quantity of penetrating services prevent the use of a steel plate as detailed above, allowance for all the inclusion of steel reinforcement within the construction must be made.

More examples of installation shown here.



Important Notes

Promat product data sheets and health and safety data sheets are regularly reviewed and are available on request. The successful use of this product is dependent on a number of factors. As the information contained in this literature can only be of a general nature, it is advisable to consult our technical department if there is any doubt about the correct use of this product in a particular application. Our technical representatives and advisors are available to provide further technical and commercial assistance.

PROMASTOP® Cement is manufactured under a quality management system certified in accordance with ISO 9000: 2000 Certification.

ASIA PACIFIC HEADQUARTERS
Promat International (Asia Pacific) Ltd.
Tel: +60 (3) 6250 2880
Fax: +60 (3) 6250 1159
Email: info@promat-ap.com

AUSTRALIA
Promat Australia Pty. Ltd.
Tel: +1 800 30 20 20
Fax: +61 (8) 8352 1014
Email: mail@promat.com.au

New South Wales Office
Promat Australia Pty. Ltd.
Tel: +1 800 30 20 20
Fax: +61 (2) 9630 0258
Email: mail@promat.com.au

Victoria Office
Promat Australia Pty. Ltd.
Tel: +1 800 30 20 20
Fax: +61 (3) 9645 3844
Email: mail@promat.com.au

CHINA
Promat China Ltd.
Tel: +86 (20) 8136 1167
Fax: +86 (20) 8136 1372
Email: info@promat.com.cn

Beijing Office
Promat North China
(Division of Promat China Ltd.)
Tel: +86 (10) 6583 6102
Fax: +86 (10) 6583 6173
Email: info@promat.com.cn

HONG KONG
Promat International (Asia Pacific) Ltd.
Tel: +852 2836 3692
Fax: +852 2834 4313
Email: apromath@promat.com.hk

INDIA
Promat International (Asia Pacific) Ltd.
(India Representative Office)
Tel: +91 (11) 2433 1594
Fax: +91 (11) 2433 1595
Email: raman@promat.com.my

MALAYSIA
Promat (Malaysia) Sdn. Bhd.
Tel: +60 (3) 6250 2880
Fax: +60 (3) 6250 1158
Email: info@promat.com.my

SINGAPORE
Promat Building System Pte. Ltd.
Tel: +65 6294 9689
Fax: +65 6294 9783
Email: info@promat.com.sg

OFFICIAL WEBSITE
www.promat-ap.com

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