

**Promat**

**PROMASPRAY®-F5**

**Vermiculite Cement Based Wet Mix Spray**

[www.promat-tunnel.com](http://www.promat-tunnel.com)



### Advantages

- Structures protected with PROMASPRAY®-F5 can provide fire resistance for up to 240 minutes.
- Does not release toxic or hazardous fumes, and presents no known health hazards either before, during or after application.
- The surface may either be spray textured, roller or float finished.

### Quality assurance

Promat products are manufactured to stringent quality control systems to assure that our customers receive materials made to the highest standards.

Operating to these standards means that all activities, which have a bearing upon quality, are set out in written procedures.

Systematic and thorough checks are made on all materials and their usage. Test equipment is subjected to regular checks and is referred back to national standards.

The information given in this data sheet is based on actual tests and is believed to be typical of the product. No guarantee of results is implied however, since conditions of use are beyond our control.

### Introduction

PROMASPRAY®-F5 is a spray applied, single package factory controlled cement based premix, based on vermiculite and Portland cement.

PROMASPRAY®-F5 produces a monolithic coating able to withstand the thermal shocks experienced in a high intensity hydrocarbon fire. Concrete structures in particular, will be protected from explosive spalling when coated with PROMASPRAY®-F5. Although low in density, thus significantly reducing dead load, PROMASPRAY®-F5 is highly durable and will not crack or spall under mechanical impact.

PROMASPRAY®-F5 is used for application on construction elements such as concrete or individual steel sections. It is also used extensively for the refurbishment or upgrading of existing tunnel structures.

### Properties and Performances

<b>Colour and finish</b>	Off-white, monolithic, spray texture. May be floated or roller finished
<b>Minimum practical thickness</b>	8mm when unreinforced, 15mm when reinforced
<b>Theoretical coverage</b>	62m <sup>2</sup> /tonne at 25mm thickness
<b>Cure</b>	By hydraulic set
<b>Initial set</b>	2 to 6 hours at 20°C and 50% RH
<b>Density (Nominal)</b>	775kg/m <sup>3</sup> ± 15% (when dry and in place)
<b>Combustibility</b>	Non-combustible to BS476: Part 4
<b>Smoke generation</b>	Does not contribute to smoke generation
<b>Thermal conductivity</b>	0.19 W/mK at 20°C
<b>Corrosion resistance</b>	Does not promote corrosion of steel. However, a primed substrate is recommended for long term corrosion resistance, particularly when the structure is to be fully exposed to the elements. See <a href="#">Preparation</a>
<b>pH value</b>	12.0 - 12.5
<b>Sound absorption</b>	Noise reduction coefficient (NRC) 0.35
<b>Fire resistance</b>	Concrete and steel structures protected with PROMASPRAY®-F5 have undergone extensive fire resistance tests at approved independent laboratories to recognised standards throughout the world, including: UK (BS 476: Parts 20-21: 1987 Appendix D) Germany (DIN 4102) International Standard ISO 834 Netherlands, RWS (Fire Test procedures for tunnels GT-98036-1a) France, Hydrocarbon Modified HCM Italy (UNI 11076) USA (ASTM E119, UL263 and UL1709 - Design No. XR719) The fire resistance test results relate solely to the constructions tested and test conditions imposed. Promat provides computer based thickness calculations to meet specific fire resistance requirements on request.

### Preparation

<b>Typical substrates</b>	Concrete and steel
<b>Substrate preparation</b>	The substrate must be clean, dry and free from visible moisture (including condensation), concrete laitance, formwork release oils, loose millscale, loose rust and any other condition preventing good adhesion.  Concrete curing agents should not be used.
<b>Mesh reinforcement</b>	Most fire tests conducted have been carried out without mesh reinforcement, to demonstrate the ability of PROMASPRAY®-F5 to stay in place under the most severe fire conditions. However, for maximum long term in service durability, the use of lightweight mesh reinforcement is recommended for exterior work and for interior use where vibration or mechanical damage and the possibility of subsequent de-bonding exist.

### Application

<b>Initial steps</b>	Application of PROMASPRAY®-F5 must be carried out by an applicator recognised by Promat and applied in accordance with the installation guide available from Promat.
<b>Methods</b>	Mix PROMASPRAY®-F5 with potable water in a suitable mixer and apply by a spraying machine approved by Promat.  PROMASPRAY®-F5 may also be float or roller finished or left with PROMASPRAY®-F5T.  A hand applied patching mix is available for minor repairs. Please refer to product data sheet of PROMASPRAY®-F5T
<b>Limitations</b>	PROMASPRAY®-F5 may be applied when the substrate and air temperatures are at least 2°C and rising, but should not be applied if the substrate or air temperatures are less than 4°C and falling. Maximum substrate and air temperature is 50°C.  Substrate temperature should be at least 2°C above dew point temperature.

### Top coating

Top coating systems may be used as protection from frequent wash down, long term chemical spills, or for improved resistance to fungal, algal and bacterial growth. Please consult Promat for guidance.

### Packaging

20kg bags.

### Storage

Off the ground and kept dry until ready for use.

### Shelf life

Maximum 12 months.

### Environmental

- Do not discharge into drains, watercourses or soil.
- Not readily biodegradable.
- Not expected to bioaccumulate.
- Not expected to be toxic to aquatic life except at high concentrations.

### Health and safety

Adequate ventilation must be provided during use. Avoid contact with the skin and eyes by using eye protection, gloves, barrier cream and a face mask.

If the product comes into contact with the skin, wash immediately with soap and water. If the eyes are affected, flush with plenty of water and seek medical attention immediately.

A safety data sheet is available from Promat upon request.

Promat activities are conducted with due regard to all statutory requirements with appropriate safeguards against exposing employees and the public to health and safety risks.

## Head Office

### Promat International N.V.

Bormstraat 24  
2830 Tiselt  
Belgium  
Tel: +32 15 718 100  
Fax: +32 15 718 109  
Email: info@promat-international.com  
www.promat-international.com  
www.promat-tunnel.com  
www.promat-marine.com  
www.promat-oilandgas.com

## Asia Pacific Headquarters, Malaysia

### Promat International (Asia Pacific) Ltd.

Unit 19-02-01 -Level 2 PNB Damansara  
No.19 Lorong Dungun - Damansara Heights  
50490 Kuala Lumpur  
Tel: +60 3 2095 5111  
Fax: +60 3 2095 6111  
Email: info@promat-ap.com  
www.promat-ap.com

## Australia

### Promat Australia Pty. Ltd.

1 Scotland Road  
SA 5031 Mile End South  
Tel: 1800 Promat (776 628)  
Fax: +61 8 8352 1014  
Email: mail@promat.com.au  
www.promat-ap.com

## Austria

### Promat GmbH

St.-Peter-Straße 25  
4021 Linz  
Tel: +43 732 - 6912 - 0  
Fax: +43 732 - 6912 - 3740  
Email: office@promat.at  
www.promat.at

## Belgium

### Promat Belgium

Bormstraat 24  
2830 Tiselt  
Tel: +32 15 719 351  
Fax: +32 15 718 229  
Email: info@promat.be  
Email: techniek@promat.be  
www.promat.be

## China

### Promat China Ltd.

Room 506, Block A, Qi Lin Plaza  
13-35 Pan Fu Road  
510180 Guangzhou  
Tel: +86 20 8136 1167  
Fax: +86 20 8136 1372  
Email: info@promat.com.cn  
www.promat.com.cn

## Czech Republic

### Promat s.r.o.

Kkalova 22/784  
16000 Praha 6 - Bubeneč  
Tel: +420 2 2439 0811  
Fax: +420 2 3333 3576  
Email: promat@promatpraha.cz  
www.promatpraha.cz

## Denmark

### Promat Nordic

Kometvej 36  
6230 Rødskro  
Tel: +45 7366 1999  
Fax: +45 7466 1020  
Email: info@promat.nu  
www.promat.nu

## France

### Promat

BP 66 Rue de L'Amandier  
78540 Vernouillet  
Tel: +33 1 3979 6160  
Fax: +33 1 3971 1660  
Email: info@promat.fr  
www.promat.fr

## Germany

### Promat GmbH

Scheifenkamp 16  
40878 Ratingen  
Tel: +49 2102 493 0  
Fax: +49 2102 493 111  
Email: mail@promat.de  
www.promat.de

## Hong Kong

### Promat International (Asia Pacific) Ltd.

Room 1010, C.C. Wu Building  
302-308 Hennessy Road, Wanchai  
Tel: +852 2836 3692  
Fax: +852 2834 4313  
Email: apromath@promat.com.hk  
www.promat.com.hk

## India

### Promat (Malaysia) Sdn. Bhd. (India Representative Office)

610-611, Ansal Imperial Tower  
C-Block, Community Centre  
Naraina Vihar, Naraina  
110028 New Delhi  
Tel: +91 11 2577 8413  
Fax: +91 11 2577 8414  
Email: info-india@promat-asia.com  
www.promat-ap.com

## Italy

### Promat S.p.A.

Via Perlasca 14  
27010 Vellezzo Bellini (PV)  
Tel: +39 0382 4575 200  
Fax: +39 0382 926 900  
Email: info@promat.it  
www.promat.it

## Japan

### Promat Japan Corporation

Pacific Marks Shinjuku 4-15-7  
Nishi-Shinjuku, Shinjuku-Ku  
160-0023 Tokyo

## Malaysia

### Promat (Malaysia) Sdn. Bhd.

Unit 19-02-01 - Level 2 PNB Damansara  
No.19 Lorong Dungun  
Damansara Heights  
50490 Kuala Lumpur  
Tel: +60 3 2095 8555  
Fax: +60 3 2095 2111  
Email: info@promat-ap.com  
www.promat-ap.com

## Netherlands

### Promat B.V.

Vleugelboot 22  
3991 CL Houten  
PO Box 475  
3990 GG Houten  
Tel: +31 30 241 0770  
Fax: +31 30 241 0771  
Email: info@promat.nl  
www.promat.nl

## Poland

### Promat TOP Sp. z o. o.

ul. Przeclawska 8  
03 879 Warszawa  
Tel: +48 22 212 2280  
Fax: +48 22 212 2290  
Email: top@promatop.pl  
www.promatop.pl

## Russia

### Promat

Pr. Vernadskogo 84/2  
119606, Russia  
Tel: +7 (495) 246 01 01  
Fax: +7(495) 246 01 92  
Email: sales@promat.ru  
www.promat.ru

## Singapore

### Promat Building System Pte. Ltd.

10 Science Park Road  
#03-14 The Alpha - Singapore Science Park II  
117684 Singapore  
Tel: +65 6776 7635  
Fax: +65 6776 7624  
Email: info@promat.com.sg  
www.promat-ap.com

## South East Europe Headquarters, Slovenia

### Promat d.o.o.

Kidričeva 56b  
4220 Škofja Loka, Slovenia  
Tel: +386 4 51 51 451  
Fax: +386 4 51 51 450  
Email: info@promat-see.com  
www.promat-see.com

## South Korea

### Promat International (Asia Pacific) Ltd.

(Korea Branch Office)  
Room 406, 811-2 - Yeoksam-dong  
Gangnam-gu  
135080 Seoul  
Tel: +82 70 7794 8216  
Email: apromath@promat.com.hk  
www.promat-ap.com

## Spain

### Promat Ibérica S.A.

C/Velazquez, 47 - 6° izda  
28001 Madrid  
Tel: +34 91 781 1550  
Fax: +34 91 575 1597  
Email: info@promat.es  
www.promat.es

## Switzerland

### Promat AG

Stationsstrasse 1  
8545 Rickenbach-Sulz  
Tel: +41 52 320 9400  
Fax: +41 52 320 9402  
Email: office@promat.ch  
www.promat.ch

## United Arab Emirates

### Promat Fire Protection LLC

Plot no. 597-921,  
Dubai Investment Park 2  
PO Box 123945, Dubai  
Tel: +971 4 8850 3070  
Fax: +971 4 8853 588  
www.promatfp.ae

## United Kingdom

### Promat UK Ltd.

The Sterling Centre, Eastern Road,  
Bracknell  
RG12 2TD Berkshire, Great Britain  
Tel: +44 1344 381 300/400  
Fax: +44 1344 381 301  
Email: marketinguk@promat.co.uk  
www.promat.co.uk

## USA

### Promat Inc.

1731 Fred Lawson Drive  
TN 37801 Maryville  
Tel: +1 865 681 0155  
Fax: +1 865 681 0016  
Email: sales@promat.us  
www.promat.us