

Promat



# PROMASPRAY® P300

*Vermiculite Gypsum Based Wet Mix Spray For Fire Protection To Galvanised Steel Air Ducts*



## PROMASPRAY® P300

### Vermiculite Gypsum Based Wet Mix Spray For Steel Air Duct Fire Protection

#### INTRODUCTION

PROMASPRAY® P300 is a spray or trowel applied, single package factory controlled premix, based on vermiculite and gypsum, for internal use.

PROMASPRAY® P300 is a lightweight coating that provides very efficient fire resistance with minimal thickness to steel and concrete frames, metal floor and roof decks, return air plenums and air handling ductwork.

Air ducts protected with PROMASPRAY® P300, applied in accordance with the manufacturer's instructions will provide fire resistance for up to 120 minutes.

Building types that will benefit from the use of PROMASPRAY® P300 include a wide range of educational, leisure and entertainment centres, and commercial projects.



Properties and performance	
Colour and finish	Off white with a monolithic spray texture.
Theoretical coverage	217m <sup>2</sup> /tonne at 15mm thickness.
Cure	By hydraulic set.
Initial set	10 to 15 hours at 20°C and 50% RH without accelerator.
Bond impact	No cracks or delaminations in accordance with ASTM E760.
Air erosion resistance	No erosion in accordance with ASTM E859.
Compressive strength	1.22kg/cm <sup>2</sup> in accordance with ASTM E761.
Deflection effect	No spalling, delamination or cracking in accordance with ASTM E759.
Thermal conductivity	0.078W/mK.
Corrosion resistance	Does not promote corrosion of steel and does not require application over primed steel. Please seek structural engineer's advice concerning long term corrosion protection.
pH value	8.0 - 8.5.
Fire resistance	Ventilation ductwork protected to AS 1530.4:2005 will provide FRL's up to 120/120/120 for both fire inside and out. For FRL in excess of 120 minutes, please refer to Promat.  The fire resistance test results relate solely to the constructions tested and test conditions imposed.

- Generally ducts are required to be constructed in accordance with AS 4254.
- PROMASPRAY® P300 at 40mm will apply a load of approximately 25kg/m<sup>2</sup> when wet (including mesh and pins) and 13kg/m<sup>3</sup> when fully cured.
- If the tensile stress in the hangar rod is less than 10N/mm<sup>2</sup> the hangar rods may be left unprotected. For specific information on hangar sizes please contact Promat.
- The maximum spacing hanger system should not exceed 2500mm centres for ducts providing up to 120 minutes fire resistance.
- Maximum size of duct is 4,000mm x 1,000mm.



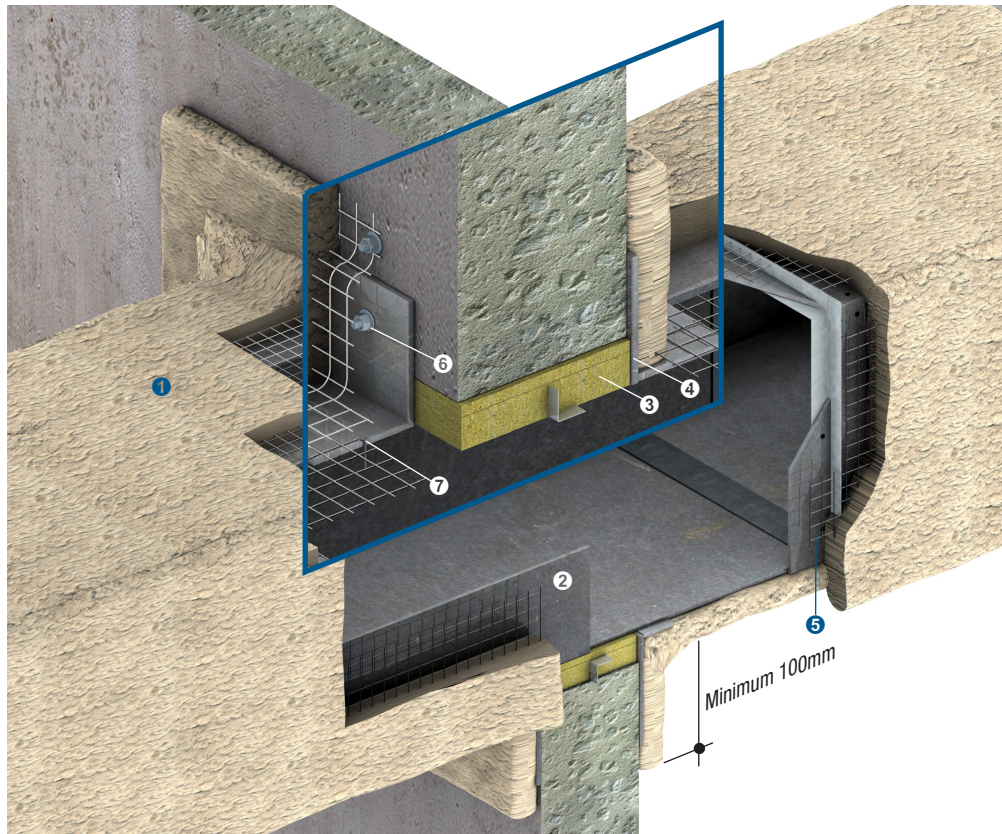


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### PENETRATION SEALING SYSTEM

Where the duct penetrates the compartment wall, mineral wool is tightly packed into the gap between the duct and the building element. Steel angles 100mm x 50mm x 1mm thick are fixed around the perimeter of the duct, and to the wall. See drawing for details.



### VERTICAL DUCTS

The construction of the vertical system is the same as the horizontal, but with the following variations;

- The duct must be supported at each floor level so that the weight of the duct is taken by the floor. The penetration seal must not be compromised.
- If the distance between floors is greater than 5 metres, then intermediate supports must be fitted.

### APPLICATION

The PROMASPRAY® P300 is retained with one (1) layer of mechanical reinforcing mesh. The mesh may be either 25mm x 25mm x 1.0mm square welded wire mesh or 25mm x 25mm x 0.8mm hexagonal mesh.

The mesh is located in the middle of the overall thickness of the sprayed coating and is retained with either self adhesive or welded stick pins. The pins are arranged in a grid pattern at nominal 500 mm centres.

The mesh is held in place on the pin with speed clip washers. Adjacent bands of wire mesh are overlapped by a minimum 100mm.

Application shall be by approved recognised applicators of Promat Australia.



- 1 PROMASPRAY® P300 around galvanised steel duct
- 2 Galvanised steel duct
- 3 Mineral wool tightly packed into aperture between substrate
- 4 100mm x 100mm x 1mm, steel angle fixed to both the duct and the surrounding building element
- 5 Square wire mesh 25mm x 25mm x 1.0mm.
- 6 M6.5 x 25mm steel masonry anchors anchor bolts at nominal 200mm centres
- 7 M4 x 25mm self-tapping Teks screws at nominal 200mm centres

### QUALITY ASSURANCE

Promat manufactures to a quality system in accordance with ISO 9001:2000 and has received full accreditation to these 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.



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### HEALTH AND SAFETY

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

Where a dust inhalation hazard exists, dust mask or other appropriate P.P.E. should be worn.

PROMASPRAY® P300 is not considered a hazardous product in accordance with Safe Work Australia.

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.



### THICKNESS

Duct Exposure To Fire	Thickness (mm)
Internal Exposure	40
External Exposure	36

### TYPICAL ARCHITECTURAL SPECIFICATION

The work consists of all material, equipment and labour for the supply and installation of all required spray-applied fireproofing.

The complete installation shall comply with all applicable requirements of the Building Code of Australia (BCA).

The air conditioning ductwork shall be protected with PROMASPRAY® P300 as supplied by Promat Australia.

The air conditioning ductwork shall be provided with an FRL of 120/120/120.

The surface finish shall be "off the gun" textured finish.

### Preparation

#### Typical substrates

Sheet steel air handling equipment.

### Application

#### Initial steps

Application of PROMASPRAY® P300 must be carried out by a Promat Recognised Applicator.

#### Methods

Mix PROMASPRAY® P300 with potable water in a suitable mixer and apply by a spraying machine approved by Promat. PROMASPRAY® P300 may also be float finished using conventional hand tools or spray textured.

#### Limitations

PROMASPRAY® P300 may be applied when the substrate and air temperatures are at least 4°C and rising, and must be maintained for 24 hours before, during and 24 hours after application. Maximum substrate and air temperature is 45°C. Substrate temperature should be at least 2°C above dew point temperature.

Please refer to your nearest Promat office for specific details pertaining to local conditions.

### PACKAGING

20kg bags.

### STORAGE

Protect from frost, excessive heat (above 45°C) and strong radiant sunlight.

### SHELF LIFE

Maximum 12 months.

### ENVIRONMENTAL

Do not discharge into drains, watercourses or soil.



For latest information of the Promat Asia Pacific organisation, please refer to [www.promat-ap.com](http://www.promat-ap.com).

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