

FIREPRO

FIRE PROTECTIVE BUILDING PRODUCTS

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

FIRESAFE GPG FIRESTOP MORTAR

- Firestopping floor and wall gaps
- Fire Tested with pipes (BS476.20) and cables (AS1530.4)
- Easy to install additional services
- Repair of concrete scars and cotter slots
- Simple to apply

GENERAL

GPG is a powder consisting of plaster, perlite and glass fibre that when mixed with water forms a mortar. For internal use in dry conditions. The mortar hardens into a strong and fireproof material. GPG is used for fire proofing penetrations of cables, pipes and small holes in walls and floors. The mortar effectively prevents fire, smoke, and poisonous gases from spreading between fire cells. GPG is also used for isolation against noise, drafts, air pollution as well as for finishing work such as repair of scars in concrete, cotter slots, etc. The mortar has excellent finishing properties and adheres to concrete, plaster and steel. Hardened mortar may be drilled or sawn so that cabling or piping can be changed.

GPG is a firestopping product. Refer to page 3 for strength data tests on unreinforced GPG. Strength may be increased by reinforcing in the manner required by the specifier. When fall through is possible, GPG may be bridged immediately with load bearing steel mesh or expanded metal or an impermeable barrier once the compound is cured. The load bearing bridging to be independently supported.

FIRE TESTING

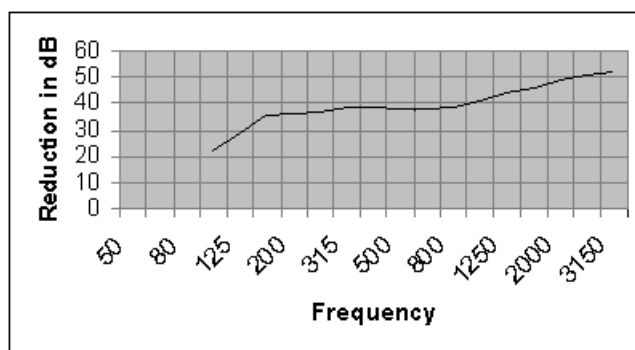
GPG has been fire tested to Australian, British, Scandinavian (ISO834) and other Test Standards with a variety of penetrating items. Tested by CSIRO to AS1530.4 using a 120mm thick, 400mm wide and 1150mm long panel, (CSIRO Test Certificates state that this was intended to represent a longer run of infill panel), with the results: GPG panel up to 400mm wide FRL 240/240/240 Cable ladder through GPG FRL NA/240/240 Cables through GPG – dependent on cable type, up to FRL NA/240/240

PACKING

GPG is packed in 30 litre bags. Sealing volume per bag 0.021m^3 (0.0007m^3 per litre). A 30 litre bag will seal approximately 0.175m^2 at 120mm thick (e.g. a gap 300mm x 583mm)

ACOUSTIC

The following graph shows the Reduction in Decibels of GPG at a thickness of 100mm.



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.

FIRESAFE GPG

FIRESTOP MORTAR (continued)

APPLICATION

Health and Safety

Refer to Material Safety Data Sheet. Treat as plaster based product when handling.

Carry out Risk Assessment and take action to eliminate risks that may be present. These risks may include but are not limited to, working from ladders, above holes in floors, working with powdered material and working with water around electrical cables and other electrical installations. Ensure that other workers and building users are protected by barriers and signs until permanent load bearing covering is provided on floors.

Shuttering

When sealing holes in floor slabs temporary shuttering must be provided on the soffit until the GPG has hardened. Alternatively, permanent non combustible shuttering may be installed within the slab depth.

The Hole

Check the hole is free from combustible materials, dirt, dust or other contaminants and that it provides a suitable keying surface on all sides. Where necessary attach mechanical grips, angles or reinforcing.

Items penetrating the hole

Recommended minimum clearance between services passing through the hole and the surrounding structure is 50mm or half the diameter of the penetrating item, whichever is greater.

Loose cables: separate by a minimum of half the average diameter of the cable with a minimum of 10mm.

Pipes: should be separated by a minimum of half the average diameter of the pipes. Protect non-galvanised metal pipes from corrosion from moisture and condensation by taping or with non combustible insulation. B306 pipe wraps may be necessary around the insulation. UPVC and other plastic pipes to be protected with intumescent pipe wraps or collars. Refer to separate Data Sheets.

Installation

Install GPG following instructions on the bag. Water must be clear and to be warmer than 10°C. Do not use more water when mixing than as shown below as this may delay drying and weaken the GPG. Mixing may be by hand or with a power mixer.

Storage: Protect bags from impact damage. Store dry, flat and frost free. Storage life almost unlimited.

Mixing Ratios	GPG to Water
Accessible vertical areas	4:1
Cable bunches through walls	3:1
General working/gunning	3:1
Holes in floor slabs	2:1

Curing

Protect from water, damage and accidents until fully cured. Typically curing takes approximately 21 days depending upon humidity and other site and environmental conditions. Do not cover with impermeable barrier until cured. Install safety barriers and signage where appropriate.

GPG expands approximately 1% in curing.

Load Bearing Bridging

If load bearing bridging is required, advise client regarding need to keep safety barriers in place until bridging is installed.

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FIRESTOP MORTAR (continued)

MATERIAL DATA

Mechanical

Compressive strenght.....	(M Pa)	:8	(80kg/cm ²)
Impression strenght:			
- Cylinder/diameter.....Ø20 mm	(M Pa)	:13	(Load: 4kN)
- Cylinder/diameter.....Ø40 mm	(M Pa)	:11	(Load: 15kN)

Thermal

Spesific heat.....at 20 °C	(J/kg °C)	:575	(0.14 kcal/kg °C)
.....at 1000 °C	(J/kg °C)	:986	(0.25 kcal/kg °C)
Thermal conductivity.....at 20 °C	(W/m °C)	:0.19	(0.22 kcal/kg °Ch)
.....at 100 °C	(W/m °C)	:0.15	(0.13 kcal/kg °Ch)
.....at 500 °C	(W/m °C)	:0.17	(0.15 kcal/kg °Ch)
Glowingloss.....at 600 °C	(weight-%)	:0.18	
Max. Application use.....	(°C)	:700	

Fire

Combustion ISO 1182 and NT Fire 001.....	: Non-combustible
Smoke.....	: None
Corrosive combustion gazes.....	: None
Toxic decomposed products.....	: None

Physical

Density specific gravity.....	(g/cm ³)	:0.8-0.9
Expansion of volume.....	(vol-%)	:1.1
Curing time.....	(days)	: 1-3 Overcoverage earliest after 21 days

Chemical

Resistance to		
- Water.....		: Good
- Mineral oils/petrol/solvents.....		: Good
- Acids.....		: Good
- Base.....		: Good
Content of chlorine, fluorine or bromine.....	(weight-%)	: 0
Age resistance		
- No known effect of age		
- No reduction of qualities over generations		

Various

Colour.....		: Beige
Adhesiveness to concrete.....	(M Pa)	: 1.0 (10 kg/cm ²)
Adhesiveness to steel.....	(M Pa)	: 0.35 (3.5 kg/cm ²)
Blast resistance (10 cm thick concrete partition).....	(Bar)	: >7
Air- and gas permeability coefficient.....	(10-14 m ²)	: 3.5 (as concrete)
Sound isolation.....	(dB)	: Very good (10 cm : 50 dB) (15 cm : 65 dB)

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