

# FIRESAFE GPG MORTAR

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ETA-number: 15/0026  
EI-number: See product details

## GENERAL

GPG is a powder consisting of plaster, perlite and glass fibre that when mixed with water forms a mortar. The product is intended for use in internal conditions with humidity lower than 85 % RH excluding temperatures below 0 °C and without exposure to rain or UV (category Z<sub>2</sub>). 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 insulation 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.

## APPLICATION

- Fireproofing of cable penetrations.
- Fireproofing of pipe penetrations
- Fireproofing around ventilation ducts.
- Fireproofing around girders, beams and columns
- Fireproofing between fire cells.
- Construction finishing of scars in concrete, cotter slots, etc.
- Tested in brick, concrete, plaster structures and shown to have fire resistance up to EI 120, dependent on the installation

## INSTALLATION

Add GPG into a bucket with water, and mix by hand or with a power mixer for about ½ minute to a smooth mixture to the desired consistency (see mixing ratio below). Initial setting time is 75 minutes but may vary depending on the water-GPG powder ratio. FS retarder may be added to delay the curing time. Check that the hole is free from combustible materials, dirt, dust or other contaminants and that it provides a suitable keying surface on all sides. Due to the high moisture and condensation, metal pipes must always be rust proofed prior to sealing. This is best achieved through casing with tape or with fire rated cell rubber. Installation instructions from pipe supplier must be followed. Use masking tape around cutouts for a neat end result.

Mixing rations	GPG to water
Accessible vertical areas	4:1
General working/gunning	3:1
Holes in floor slabs	2:1

## PACKING

GPG bucket 10 ltr and GPG 5 ltr bucket containing sealed plastic bags with GPG for easy removal. This contributes to easy handling for users of GPG, since one can use the bucket for mixing the desired amount.

## STORAGE

Store dry, flat and frost free. Storage life almost unlimited

## SAFETY ISSUES

Firesafe GPG complies with the requirements of GEV and the results correspond to the EMICODE emission class EC 1PLUS. It also complies with the requirements of the ISO 16000 based M1 classification. There are no health or safety issues.



**25 liter bag**  
FS-article nr.: 100 050  
EI-number: 12 178 00



**15 liter bag**  
FS-article nr.: 100 100  
EI-number: 12 178 60



**10 liter bucket**  
FS-article nr.: 100 017  
EI-number: 12 178 48



**5 liter bucket**  
FS-article nr.: 100 101  
EI-number: 12 178 59



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## MATERIAL DATA

### Mechanical

Compressive Strength.....	(MPa)	:	12	(120kg/cm <sup>2</sup> )
Impression Strength:				
- cylinder/diameter .....	Ø20 mm (MPa)	:	13	(Load:4kN)
- cylinder/diameter .....	Ø40 mm (MPa)	:	11	(Load:15kN)

### Thermal

Specific heat .....	v/20°C (J/kg°C)	:	575	(0.14 kcal/kg°C)
.....	v/1000°C (J/kg°C)	:	986	(0.25 kcal/kg°C)
Thermal conductivity EN 12664/EN12667 .....	v/10°C (W/mK)	:	0.14	(0.25 kcal/kg°CCh)
.....	v/100°C (W/m°C)	:	0.15	(0.13 kcal/m°CCh)
.....	v/500°C (W/m°C)	:	0.17	(0.15 kcal/m°CCh)
Loss of mass on heating EN ISO 3451-1.....	v/950°C (weight-%)	:	7.7	
Max application use .....	(°C)	:	700	

### Fire

Combustion ISO 1182 og NT Fire 001 .....	:	Non-combustible material
Smoke .....	:	None
Corrosivity of fire gases .....	:	None
Toxic decomposition products .....	:	None

### PHYSICAL

Density(weight) .....	(g/cm <sup>3</sup> )	:	0.7	
Volume Increase by curing .....	(vol-%)	:	1.1	
Initial setting time EN 480-2 .....	(minutes)	:	75	
Curing time .....	(days)	:	1-3	paintable earliest after 21 days

### CHEMICAL

resistant to:

Water .....	:	Good
Mineral oil / petrol / organic solvents .....	:	Good
Acid .....	:	Good
Base .....	:	Good

Content of chlorine, fluorine or bromine .....

(veight-%) : 0

Age resistant: No known aging degradation. No reduction of properties over time.

### Miscellaneous

Colour .....	:	Beige
Adhesiveness to concrete .....	(M Pa)	: 1.0 (10 kg/cm <sup>2</sup> )
Adhesiveness to steel .....	(M Pa)	: 0.35 (3.5 kg/cm <sup>2</sup> )
Blast resistance (10 cm thick concrete wall) .....	(Bar)	: >7
Air permeability cured product EN 1026. ....	:	Air thight
Sound insulation EN ISO 10140 .....	:	30 mm thickness; 33dB, 100 mm thickness 41dB
Water vapor resistance sd-value EN ISO 12572 .....	(m):	0.068
The penetration seal fulfils the requirements in EOTA TR 001 clause A.1, for a maximum wall opening of 1000 x 1000 mm.		
Zones: Type I, II, III and IV		



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