

# FIRESAFE GPG MARINE (GPGM)

## GPG MARINE

GPG Marine (GPGM) is a further development based on the well known Firesafe GPG mortar, which has been in successful operation for several decades. In addition to excellent fire resistant qualities GPGM also has, high explosion rating and, very good water repellent properties. This makes the product an excellent choice for use in marine/offshore environments.

## GENERAL

GPGM is a powder consisting of gypsum, perlite and glass fibre, in addition to other ingredients and additives. When mixed with water the mortar hardens into a strong and fireproof material. GPGM is used as a fire proof sealing material in cable/pipe penetrations through bulkheads and decks. The mortar effectively prevents fire, smoke, and poisonous gases from spreading through fire barriers.

## EXPLOSION/BLAST TESTED:

Tested and approved by DNV for explosions  
> 3,3 barg @ 563 msec.

**Fire tests:** Tested for cable- and pipe penetrations in decks and bulkheads. A0, A60, H0, H60, Jetfire 350kW/m<sup>2</sup>  
For specific details, see installations manual.

**Other tests and approvals:** MED A and D Certificates, Lifetime test in acc. To ISO 20340, CUI tested by DNV, inhouse vibration test.

## APPLICATION

- Fireproofing of cable penetrations.
- Fireproofing of pipe penetrations. Alternatively together with Firesafe's Pipe Wrap

## INSTALLATION

Check that the inside of the sleeve is clean and free from dirt, dust or other contaminants. The inside of the sleeve might be

carefully grinded for a rougher surface, but this is not mandatory. If necessary, use backfill of e.g. stone wool to get the necessary depths and dimensions for Firesafe GPG Marine which can be removed when GPG Marine is completely dry.

Add GPGM into a bucket with water (NB: water first in the bucket), 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-GPGM powder ratio. Check that the inside of the sleeve is free from combustible materials, dirt, dust or other contaminants and that it provides a clean inner surfaces.

Mixing ratios	GPGM to water
Accessible vertical areas	4:1
General working/gunning	3:1
Holes in floor slabs/decks slabs	2:1

## PACKING

Pail with 20 litre GPGM in sealed plastic bags (4x5litre) for easy application. This contributes to easy handling for users of GPGM, since one can use the bucket for mixing the desired amount.

## STORAGE

Store dry, flat and frost free. Storage life several years.

## SAFETY ISSUES

Please refer to latest version of separate Material Safety Data Sheet (MSDS)



20 liter bag  
FS-article nr.: 100 063  
EI-number: 1217884

**FIRESAFE** /

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# FIRESAFE GPG MARINE

## Material Data (approximate values)

Property	Value	Denomination/comments
Density	0,7	Kg/dm <sup>3</sup>
Colour	White/light green	Dry powder is white. When mixed with water the product change colour to light green
Volume increase during hardening	1	Percent, %, (volume)
Initial hardening time	75	minutes
Full hardening/drying time	21	Days (>10 Deg C)
Specific heat at 20 Deg C	575	J/kg°C
Specific heat at 1000 Deg C	986	J/kg°C
Thermal conductivity at 10 Deg C	0,14	W/m K
Thermal conductivity at 100 Deg C	0,15	W/m K
Thermal conductivity at 500Deg C	0,17	W/m K
Chemical resistance to water	VERY GOOD	
Chemical resistance to mineral oil/petrol/organic solvent	GOOD	
Content of chlorine, fluorine and bromine	0	



Mix GPG Marine to desired consistency



Example



Example

Contact Firesafe Energy AS for more details.



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