PERLITA Y VERMICULITA

GRUPO PV

Data Sheet

Perlifoc LD

Low density fire-retardant mortar for passive fire protection

Gypsum based fire resistant mortar with thermal insulation properties for passive fire protection in structural elements and enclosures.

Perlifoc LD (Low Density) has a higher concentration of lightweight aggregates that reduces the density. This means a lower weight load on the structure to be protected.

Advantages:

- Low density mortar. Means less load on the surface to be protected
- Setting retarder which provides greater workability
- Application without cracks or fissures.
- Does not require the application of any primer, mesh or similar on concrete structures
- Asbestos free
- Mineral wool free. Does not emit fibres
- Styrene free. Does not generate toxic gases from decomposition
- Usable in more than 40 UL designs

Field of application

Perlifoc mortar is used for coating the structural elements of buildings for passive protection in case of fire, in order to maintain stability and the resistant capacity of these elements until the fire is extinguished and/or the building is evacuated.

Surface preparation

The surface must be dry and free of grease, dust and dirt. When the surface does not offer sufficient guarantees of adherence, mesh or primer can be placed to ensure good adhesion.

Application equipment

The following types of equipment can be used:

1.- Discontinuous mortar mixing machine for industrial use, 350-450 litres, capable of operating at 40 rpm.

2.- Continuous feed mixing machine. Contact Technical Support for recommendations. Densities may vary using these types of mixer.

Product application

1. Preparation of the mortar. Add water to the mortar with a ratio of approximately 1.6: 1 water (20 litres of water per sack of mortar). The water and mortar ratio determines the desired consistency.

2. Mechanical application should be done using wet mortar spraying machines with screw pump. Thicknesses of up to 20 mm can be applied in a single layer.

The useful life of the mixture is 2 hours (21 °C).

Technical specifications*

Base	Gypsum
Colour	Greyish brown
Dry density of product (minimum)	240 kg/m^3
Adhesion	≥ 0.030 N/mm^2
Compressive strength	≥ 0.25 N/mm^2
(after 28 days)	
Theoretical performance	3 Kg/m^2/cm
Thermal conductivity	0.105 W / mK (at 24 °C)
Combustibility	Non-combustible
Presentation	12 kg bags 30 bags/pallet (360 Kg)
Storage	The Perlifoc LD material is ready for use until one year after delivery. It should be kept closed and dry.

* Tests conducted by internal laboratory
Note: Densities may vary if using a mixer working in continuous operation

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Application conditions

Condition	Material	Surface	Environment	Humidity
Minimum	4 ºC	4 ºC	4 ºC	0 %
Maximum	38 ºC	52 ºC	43 ºC	95 %

Air and surface temperatures must be kept stable for 24 hours before and 24 hours after application. Gypsum-based products are susceptible to water and must be protected accordingly.

The curing time of the product is 4 hours in conditions of 25 °C and 50 %. This time could vary depending on environmental conditions and air movement.

Cleanliness and safety

The pump, mixer and the hoses of the spraying machine should be cleaned with potable water.

The hoses must be cleaned along their entire lengths with sponges, to remove any waste material.

Dry excesses of spray may require scraping for disposal.

Approvals and Certificates

Mortar tested according to ASTM E119/UL263 Underwriters Laboratories Inc. (UL Laboratory) with the following designs:

Pillars: Y707, Y708
Roof: P734, P735, P736, P737, P738, P739, P926, P927, P928, P929
Roof beams: S731, S732, S733
Beams: N771, N772, N773, N774, N775
Ceilings and floors (restricted / unrestricted): D767, D768, D769, D770, D771, D772, D773, D774, D775, D776, D777, D927, D928
Walls: U704
Precast concrete & steel beams: G706, G707, G708, J713, J714, J715, J716

PERLIFOC LD mortar has been subjected to a variety of tests of harmonised European standards to determine its fire resistance in different systems.

- Concrete structure according to EN 13381-3
  Classified system up to REI 240

All fire resistance tests have been carried out by accredited laboratories

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The information in this data sheet is based on our knowledge and experience to date and is given for information only. We are not responsible for anomalies caused by misuse of the product.

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