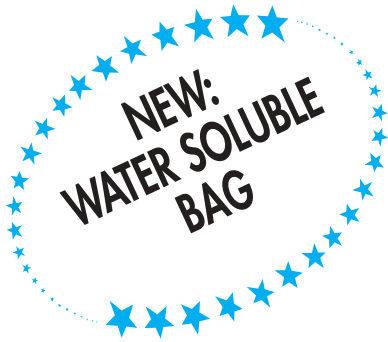


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# MAPEPLAST LA POWDER

## ADDITIVE FOR FLUID PUMPABLE FILL AND LIGHT MORTAR AND CONCRETE



### DESCRIPTION

MAPEPLAST LA powder is an additive with foaming action for entraining high volumes of air in cement mixes, especially recommended for producing easily pumpable light mortar and concrete.

### WHERE TO USE

Because of its foaming action and its ability to form evenly spaced micro-bubbles of air in the cement matrix, MAPEPLAST LA powder produces light, easily pumpable mortar and concrete with high stability and cohesion. The reduced density of the cement matrix caused by the presence of air bubbles

formed by MAPEPLAST LA powder prevents light aggregates from floating to the surface.

MAPEPLAST LA is especially recommended for:

- Preparing mortar and concrete with natural and artificial light aggregates (pumice, expansive clay, polystyrene) with high insulating capacity.
- Preparing high stability super-fluid aerated mortar and concrete with a low modulus of elasticity and tensile strength for filling ground cuts after laying pipe.

### Typical applications

Because of its ability to entrain air in the

form of spherical micro-bubbles, MAPEPLAST LA powder produces light mortar and concrete with remarkable flow properties (high fluidity) and high stability (absence of segregation), especially recommended for:

- Light mortar for filling spaces in hollow wall masonry.
- Mortar and concrete for filling ground cuts after laying pipe for water and gas lines, sewers, electric and telephone cables, etc.

### TECHNICAL CHARACTERISTICS

MAPEPLAST LA powder is a blend of special additives and surface-acting agents with strong foaming action developed by MAPEI for producing light concrete and mortar with high stability and easy pumpability.

MAPEPLAST LA powder is especially effective for producing aerated mortar and concrete for filling ground cuts after laying pipe. The air entrainment action of MAPEPLAST LA powder produces cement mixes with remarkable rheological properties during pouring (mortar and concrete that flow like liquids and need no manual or mechanical compaction) and absolute dimensional stability when cured (no settling occurs once the cut is filled).

Foamed concrete made with MAPEPLAST LA powder:

- fills in cuts perfectly and also provides a perfect seal for pipe joints. The excellent results obtained in filling cuts with foamed concrete and mortar admixed with MAPEPLAST LA powder prevents the bleeding of water that usually occurs when loose earth is used for fill;
- enables the excavation site to be quickly reopened to traffic. Only 24 hours after pouring, the mix reaches on average a resistance to deformation equal to that of compacted soil, and after 48 hours reaches the performance level of a cemented mix;

- prevents the fill material from settling caused by the load of traffic passing over it. Foamed concrete and mortar produced with MAPEPLAST LA powder adhere perfectly to the wall of the cut and are as solid as the surrounding ground. Using MAPEPLAST LA powder prevents the settling that occurs when cuts are filled with gravel or conventional cement mixes, along with the resulting cracks in the bituminous road surface;

- can be easily removed during maintenance or substitution of pipes and cables. Because foamed concrete made with MAPEPLAST LA powder has only moderate resistance to tensile and shearing stress, the hardened material can be easily removed with even a shovel.

Whether used for preparing insulating mortars or foamed concrete for filling in cuts, the foaming action of MAPEPLAST LA powder can be adjusted by varying the amount used. MAPEPLAST LA powder's exclusive water-soluble bag can be loaded directly onto the aggregate conveyor belt, eliminating opening and disposal of bags and waste of material, along with minimizing the possibility of making a mistake in the dosage. Usually one 0.5-kg bag should be used for every m<sup>3</sup> of mix.

The composition of foamed mortar and concrete can vary greatly depending on specific requirements and applications. The technical data table printed here lists only the composition of a typical foamed concrete mix used for filling, and its rheological and mechanical properties.

### Compatibility with other products

MAPEPLAST LA powder is compatible with other products for producing special concrete, and especially with:

- all plasticisers and super-plasticisers of the MAPEPLAST, MAPEMIX and MAPEFLUID product lines for increasing mechanical strength;
- ANTIFREEZE S and ANTIFREEZE LIQUID for reducing setting and curing time;
- MAPETARD to retard setting;
- fly ash for producing concrete with artificial pozzolan;
- FORM RELEASE AGENT DMA 1000 or DMA 2000 for releasing concrete from formwork;
- MAPECURE E curing compound for preventing rapid evaporation of water from concrete cast without formwork (floors).

### CONSUMPTION

#### Average dosage

0.5 kg for every m<sup>3</sup> of mix.

### PACKAGING

MAPEPLAST LA powder is available in 0.5-kg water-soluble bags.

## TECHNICAL DATA:

### PRODUCT IDENTIFICATION

Appearance:	powder
Colour:	white
Apparent specific gravity:	0,8 kg/lit
Dry solid content:	100%
Specific action:	foaming agent
Collateral action:	improvement of pumpability
Chlorides:	absent
Storage life:	12 months in original closed packaging; protect from frost.
Health hazard according to EEC 88/379:	irritant
Inflammability:	no
Customs class:	3824 40 00

### EXAMPLE OF AERATED CONCRETE MIX

Cement CEM II/A-L 32.5:	100 kg/m <sup>3</sup>
Water:	150-180 kg/m <sup>3</sup>
MAPEPLAST LA powder:	0,5 kg/m <sup>3</sup>
Aggregates (D max. = 12 mm):	1400 kg/m <sup>3</sup>
Specific gravity:	1650-1700 kg/m <sup>3</sup>
Resistance to compression: - after 28 days:	2 ÷ 3 N/mm <sup>2</sup>

### MODULUS OF DEFORMATION (load on slab test):

- after 24 hours:	110 N/mm <sup>2</sup> with ΔP: 0,15 ÷ 0,25 N/mm <sup>2</sup>
- after 48 hours:	430 N/mm <sup>2</sup> with ΔP: 0,15 ÷ 0,25 N/mm <sup>2</sup>
- after 48 hours:	330 N/mm <sup>2</sup> with ΔP: 0,25 ÷ 0,35 N/mm <sup>2</sup>
- after 28 days:	750 N/mm <sup>2</sup> with ΔP: 0,15 ÷ 0,25 N/mm <sup>2</sup>
- after 28 days:	600 N/mm <sup>2</sup> with ΔP: 0,25 ÷ 0,35 N/mm <sup>2</sup>

## **STORAGE**

Store in closed containers, protect from frost and exposure to direct sunlight.

## **WARNING**

*N.B. Although the technical details and recommendations contained in this report correspond to the best of our knowledge and experience, all the above information must, in every case be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure*



*beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.*

**N.B. FOR PROFESSIONALS**

