

Mortar and fiber plaster based on natural hydraulic lime NHL 3.5 certified EN 459-1

Mortar based on natural hydraulic lime certified NHL 3.5 according to EN 459-1 suitable for use as an interior and exterior plaster type GP. Complies with EN 998-1 and EN 998-2 and classified M15. CE mark. Suitable for the creation of highly breathable plasters in the sectors of green building and conservative historical restoration in interventions for the execution of structural reinforcements. It can be used as a mortar for re-joining, in stitching and unstitching operations, for the creation of parts of solid brick, stone and tuff masonry and for the creation of structural reinforcements of architectural elements (arches, vaults and pillars).

Calcestruttura IM15 is particularly suitable as a structural plaster in the SISMAWALL CRM system for the reinforcement of brick, stone, tuff or limestone wall structures, using the CRM (Composite Reinforced Mortar) reinforced plaster technique, made up of flexible AR fiberglass meshes: SISMANET, flexible roll angle: SISMACOR, pre-formed "L"-shaped fiberglass connectors: SISMABAR and SISMACAST chemical anchor.

#### SUBSTRATE PREPARATION

The substrate must be mechanically resistant, homogeneous, rough, flat and clean. If it is not flat, it must be previously levelled with the same material. The substrate must be free of dust, grease and all sediments that damage the plaster's adhesion. In the frequent case of restoration work, careful stripping of the mortar joints must be carried out beforehand in order to eliminate all friable and mechanically weak materials. Prior to application, the substrate must be wetted to saturation by wetting with water.

#### MANUAL APPLICATION: PLASTER/MORTAR

**CALCESTRUTTURA IM15** is prepared by mixing the powder with approximately 22-24% of drinking water (6.6-7.2 l per 30 kg bag). It is advisable to pour the water first, then add all the powder of the product. Mix carefully and continuously until obtaining a plastic and thixotropic consistency. Mix in a cement mixer for no more than 5 minutes. Do not add any other binder or inert material to the product so as not to alter its mechanical resistance or application characteristics. To plaster with the **SISMANET** structural mesh, apply a first coat of covering roughcast with a thickness as uniform as possible and sufficient to be able to incorporate the mesh itself. Then fix the **SISMABAR** connectors with the **SISMANET RT** load-distributing gussets, grouting them to the support with the **SISMACAST VE** vinyl-ester chemical anchor or **SISMACAST EP** epoxy. Fresh on fresh (max. after 24-36 hours) apply the second coat for a total thickness of at least 30 mm. The reinforcement mesh must be positioned halfway through the total thickness of the mortar. Do not mix the product by adding water once it has started to set.

#### APPLICAZIONE A MACCHINA: INTONACO MACHINE APPLICATION: PLASTER

Product designed for applications with a plastering machine with screw and D6-3 lung. To plaster, pour the contents of **CALCESTRUTTURA IM15** into the hopper of a continuous cycle plastering machine, adjust the flow meter until a plastic-thixotropic consistency is obtained. Spray the product at a distance of 20-25 cm approx. The reinforcing mesh, angles, connectors and handkerchiefs, in this case, can be mounted in advance on the support, before proceeding with the mechanical projection of the structural mortar. Also in this case, the mesh, at the end of the operation, must be approximately half the total thickness of the applied material; for this purpose, it is recommended, in the case of preventive assembly of the mesh, to use appropriate spacers in order to guarantee the correct positioning of the latter inside the mortar matrix.



**Complies with European standards  
EN 998-1, EN 998-2.  
NHL 3,5 EN 459-1**

#### VANTAGGI ADVANTAGES

High breathability.  
Eco-friendly product, low environmental impact.  
Low content of water-soluble salts.  
Chemical compatibility with historical mortars.  
Ease of application, plastic-thixotropic rheology and low shear stress.  
Reduced plastic/hydraulic shrinkage.  
High mechanical resistance.  
Thixotropy.  
In case of restoration it offers excellent physical-mechanical compatibility with the existing structure.

#### USES

Creation of structural reinforcements using the CRM reinforced plaster technique with:

- Flexible alkaline-resistant glass fiber meshes with thermosetting primer: **SISMANET 50-70-110**
- Rigid meshes with very high resistance and durability made with continuous ECR glass fibers with thermosetting epoxy resin impregnation: **ARMORCRETE NET 33x33-66x66-99x99**

Bedding mortar.

Creation of patching or stitching/stitching interventions.

Creation of structural reinforcements on architectural elements (arches, vaults, pillars).

#### STORAGE

Keep in a dry place for no more than 12 months.



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#### CHARACTERISTIC DATA

Appearance	Hazelnut coloured powder
Application temperature, °C	+5 a +35 °C
pH in aqueous solution	12
Grain size range, EN 1015-1	0 – 2,5 mm
Apparent density of the powder	1300 Kg/m <sup>3</sup>
Apparent density of the fresh mortar, EN 1015-19	1800 Kg/m <sup>3</sup>
Apparent density of the hardened mortar, EN 1015-19	1600 Kg/m <sup>3</sup>
Mixing water	22 – 24%
Minimum thickness per layer	1,5 cm
Maximum thickness per layer	2,5 cm
Coverage	14,5 Kg/ per cm of thickness

#### PERFORMANCE DATA EN 998-1: MORTARS FOR INTERNAL AND EXTERNAL PLASTERS

Compressive strength, EN 1015-11	Class CS IV
Adhesion, EN 1015-12	≥ 0,5 MPa
Capillary water absorption, EN 1015-18	Class W2
Water vapour permeability coefficient, EN 1745	$\mu \leq 35$
Thermal conductivity, EN 1745	0,67 W/mK (v.t.)
Reaction to fire, EN 13501-1	A1
Mixing water	22 – 24%
Durability	NPD

#### PERFORMANCE DATA EN 998-2: SPECIFICATIONS FOR MORTARS FOR MASONRY - MASONRY MORTARS

Compressive strength, EN 1015-11	Class M15
Elastic modulus	10 GPa
Initial shear strength in combination with masonry elements in accordance with EN 771	0,15 Mpa (v.t.)
Chloride content, EN 1015-17	≤ 0,1%
Water vapour permeability, EN 1745	15-35 (v.t.)
Thermal conductivity, EN 1745	0,67 W/mK (v.t.)
Capillary water absorption, EN 1015-18	≤ 0,2 kg/m <sup>2</sup> *min <sup>0,5</sup> )
Reaction to fire, EN 13501-1	A1

#### WARNINGS

Product intended for professional use. Check the integrity of the packaging before use and do not use the product if there are lumps. Do not mix the product by adding water once it has started to set. Any small chromatic variations do not in any way affect the final technical performance of the product. In case of application on recently created plasters, wait at least 3 weeks before applying the product. The characteristics of the product listed above respond to standard environmental conditions (20-23°C and 65% R.H.). The customer is required to verify that the product is suitable for the intended use and to ensure that this technical document is valid and not superseded by subsequent updates. The updated technical documents can be found on the website [www.premierpremiscelati.it](http://www.premierpremiscelati.it).

All the info on [www.premierpremiscelati.it](http://www.premierpremiscelati.it)

