



Basic MALTA M15

ST4-0519

Mortar made out of natural hydraulic lime for masonry class M15



DESCRIPTION

Basic MALTA M15 is a ready-to-use mortar based on natural hydraulic fiber, fiber-reinforced,; It has completely recyclable natural materials, fired at low temperatures, reducing emissions and energy consumption; it is free from Chromium VI; it contains traditional materials with a low content of soluble salts; in contact with water it forms very little soluble and very stable hydrate products of a basic nature.

It is CE marked according to the requirements of UNI EN 998-2 for mortar for masonry class M15 and according to UNI EN 998-1 as mortar for internal and external GP CS IV






USES

It is used for the consolidation of masonry structures: reinforced plasters; consolidation of vaults by making collaborative castings, reinforced repointing works and masonry works for foundations.

WORKS

- CRM Structural reinforcing systems combining AR fiberglass meshes with NHL-based mortar (SA93)
- Reinforced plasters for existing masonry structures (SA53)

APPLICATION

	Manual application		Workability time of fresh mortar: 60 mins
	Mechanical device application		Mixing water: 4,5-5,5 lt/ 25Kg
	Max thickness per coat: 30 mm for vertical application		

Basic MALTA M15 must be mixed with drinking water in the quantities shown in the table. It is advisable to

introduce 3/4 of the required water into the mixer, adding the product and the remaining water continuously, until the desired consistency is achieved. Mix carefully until a perfect amalgam is obtained. The product must not be added during preparation and laying with no other binder. Apply with normal manual or mechanical equipment. Do not mix the product by adding water once it has started setting.

In the case of mixing with plastering machine (standard models), load the hopper with **Basic MALTA M15** and adjust the flowmeter at a flow rate of 5-6 l/min, depending on the machine used, until the desired consistency is achieved.

In particular we suggest to use a plastering machine with the following characteristics:

- Hose diameter: 30 mm
- Hose length: 30 m
- D7-pumps
- All remaining characteristics corresponding to a plastering machine PFT G5

Apply **Basic MALTA M15** from a distance of about 20 cm, from the bottom of the masonry towards the top, evenly. For plaster thicknesses greater than 30 mm, the application must be carried out in several coats, applying successive layers on the previous non-wrinkled layer.

Basic MALTA M15 must be applied on clean, dust-free surfaces, inconsistent parts, paints, grease and any other material that could affect the good anchoring. Before applying the product, wet the surface until SSD conditions are achieved.

CONSUMPTION

15 Kg/m²/cm

PACKAGING

Bag 25 Kg.
Pallet 60x25 – 1500 Kg

STORAGE

The product fears moisture. Store in a sheltered and dry place; in these conditions and in intact containers, the product maintains its stability for 12 months.

Characteristics	Value
Appearance	Powder
Color	White smoke
Type of binder (UNI EN 459-1)	NHL 3,5 and NHL 5
pH in water dispersion	> 11
Application temperature	+2 - +35 °C
Particle size distribution UNI EN 1015-1 (3,00mm)	100 %
Dry bulk of fresh mortar UNI EN 1015-6	1900 Kg/m ³
Consistency of fresh mortar UNI EN 1015-3	150 mm
Mechanical compressive strength UNI EN 1015-12	in 7 dd > 9 MPa in 14 dd > 12 MPa in 28 dd > 15 MPa
Flexural tensile strength	in 7 dd > 3,8 MPa in 14 dd > 3,9 MPa in 28 dd > 4 MPa

Characteristics	Limits EN 998-2	Value
Elements ratio in weight [%]	Declared value	Binder: 25-35 Aggregates: 65-75 Additives: < 1
Chloride content [%] EN 1015-17		≤ 0,1
Compressive strength in 28 dd EN 1015-11 [MPa]		> 15
Initial shear strength [MPa] with masonry elements in compliance with EN 771		0,15 [Table value]
Capillar water absorption EN 1015-18		0,2
Water vapour permeability EN 1745		15/35 [Table value]
Reaction to fire class		A1
Hazardous substances		See SDS

Characteristics	Limit value for GP mortars	Value
Dry bulk UNI EN 1015-10	Declared value	1910 Kg/m ³
Mechanical compressive strength in 28dd UNI EN 1015-11	CS I (0,4 – 2,5 Mpa) CS II (1,5 – 5 Mpa) CS III (3,5 – 7,5 Mpa) CS IV (≥ 6 Mpa)	CS IV
Adhesion UNI EN 1015-12	Declared value	> 0,6 N/mm ² - FP: B
Capillar water absorption UNI EN 1015-18	Declared value	W2
Water vapour permeability UNI EN 1015-19	Declared value	μ < 18
Average thermal conductivity λ _{10, dry, mat} UNI EN 1745	Average value as per the table	0,97 W/m ² K

	(P = 50%)	
Reaction to fire class UNI EN 13501 - 1	Declared value	A1
Durability	Declared value	NPD
Hazardous substances	Declared value	See SDS

VARIANTS

The product is available in two-component version mixed with **Kimitech BC** latex to be used in place of water (**Basic MALTA M15/BC**).

WARNING

Product for professional use.

The use of natural raw materials may result in natural color variations from one production batch to another.

If the product is not covered, use only material from the same batch of production and organize the installation in continuity.

Only use enough water to obtain the right mix. Before using, check bags have not been damaged, and do not use the product if there are any lumps.

Use the entire contents once the bag has been opened.

Do not apply the mortar to flaking, loose surfaces: in this case consult our Technical Dpt.

Do not apply at temperatures under +2 °C or above +35 °C, to surfaces in direct sunlight, when it is about to rain, or on windy or misty days.

Saturate the support before the mortar application so as to avoid that the wall absorbs an excessive amount of mixing water of the mortar, which could cause its "burning", associated to possible delaminations and cracks.

If it is necessary to lay thick layers of plaster, it is recommended that this be done in successive coats of maximum 3 cm, each one applied after the previous layer has dried, so as to avoid applying excessively thick layers of fresh plaster that might slip during setting, or differences in drying time between the surface and the internal mass that might result in the formation of micro-cracks and a decreased adhesion of the macroporous plaster to the substrate.

If the product is used to make reinforced plasters with non-traditional meshes (polymeric) in order to avoid that during the mortar application the mesh be pushed at direct contact against the support, not resulting incorporated in the jet and by acting as separation layer, is essential to create a rough coat with the structural mortar, apply and fix the network and then continue with the plaster execution according to the directions indicated on the maximum thicknesses achievable per this coat, as shown before.

If a later levelling is to be carried out, this has to be done when the plaster is completely cured (wait for at least 1 week for any centimeter of thickness, and for a minimum of 3 weeks), so as to seal any shrinkage cracks that may have formed, particularly in the case of thick layers of plaster.

In case of discontinuity points, non-homogeneous or weak substrates and high thicknesses, insert **Kimitech 350** mesh in the chosen finish.

The Obligations of marking are not related to the intrinsic nature of a given product, but to the use to which a specific material is used: before making the order in Kimia, the buyer shall submit all the documentation available to the construction supervision in order to determine the materials suitability (in terms of certifications and performance) in relation to the use for which they are intended.

The technical specifications and application methods recommended herein are based on our current knowledge and experience and do not represent any form of guarantee of the final results obtainable with the product. It is the customer's responsibility to verify the product suitability for its use by making previous tests before the application and check that this data sheet is still effective and it has not been replaced by more updated versions.

TECHNICAL SPECIFICATIONS

SK93 - CRM Structural reinforcing systems combining AR fiberglass meshes with NHL-based mortar.

SK53 - Reinforced plasters for existing masonry structures.

(SK93) Demolition of existing plaster and loose parts and scarification of bed joints. Possible reconstruction of missing or particularly damaged masonry parts. Clean and wet the surface until SSD conditions are achieved.

Apply a first coat of plaster on the masonry surface with a M15 lime-based mortar from Tectoria or Basic ranges by Kimia S.p.A. or similar products.

Installation of a glass-fiber reinforcing mesh like Kimitech WALLMESH MR or HR by Kimia S.p.A. or similar products, partially incorporating it into the fresh mortar of the rough coat, providing an overlap of the mesh strips for about 15 - 20 cm in order to guarantee mechanical continuity.

Drilling (diameter 20 mm), pass-through (where required on both sides) or for a depth of 2/3 of the wall (in the case of reinforcement on only one face) in the number envisaged by the designer (in number however not less than 3 per square meter), to be carried out in compact areas of the masonry, preferably with rotating tools.

After cleaning, insertion of preformed, "L" shaped, glass-fibre connectors like Kimitech PLUG VR with thermosetting resin and improved adherence by Kimia S.p.A. or similar products, sealed by means of epoxy resin like Kimitech EPOXY CTR by Kimia S.p.A. or similar products. Once the first coat of mortar set, apply the next coat by trowel or machine device. In case of thickness bigger than 30 mm, the application must be splitted in several layer, applying each next layer on a non-smoothed surface. The skimming coat will be applied after the necessary curing time of the plastering mortar.

(SK53) Demolition of existing plaster and loose parts and scarification of bed joints. Possible reconstruction of missing or particularly damaged masonry parts. Clean and wet the surface until SSD conditions are achieved.

Installation of reinforcing steel welded mesh (mesh size 10x10 cm with Ø 6 mm), anchored to the support by means of Ø 8 mm pre-bended rebars.

On the support with SSD conditions, apply a M15 lime-based mortar from Tectoria or Basic ranges by Kimia S.p.A. or similar products, covering the reinforcing welded mesh and with a total thickness no

smaller than 3 cm.

The ready-to-use mortar based on NHL 3.5 and NHL 5 natural hydraulic lime will comply with the requirements for masonry mortars (EN 998-2) type M15, tested with regard to the non-emission of gamma/radon radiation; it will use contain recyclable natural materials, fired at low temperatures, reducing emissions and energy consumption; it will contain no Chrome VI; it will contain traditional materials, have low soluble salt content. It will be prepared and applied scrupulously following the indications given on the technical sheets supplied by the manufacturer and will have the following characteristics:

- Mechanical resistance to compression EN 1015-12: at 7 days > 6 MPa; at 14 days > 11 MPa; at 28 days > 15 MPa; at 90 days > 20 MPa;
- Absorption by capillarity EN 1015-18: 0.20 Kg/m² · min^{1/2};
- Water vapor permeability coefficient EN 1015-19 μ < 18.

The basic binder of the product will be CE marked on the basis of EN 459 009 /CPD/ A46/0003.

It is CE marked according to the requirements of EN 998-2 for masonry mortars class M15 and according to EN 998-1 as a mortar for interior and exterior GP CS IV.