

MasterEmaco N 235

"All in 1" dehumidifying plaster with salt crystallization inhibitors for the treatment of masonry subject to capillary rising damp in the presence of salts.

DESCRIPTION

MasterEmaco N 235 is a white or grey, hydrated lime and hydraulic lime based mortar containing polyacrylonitrile fibres. It can be applied by spray with continuous cycle plastering machine or by hand to realise dehumidifying plasters.

MasterEmaco N 235 was formulated with the specific purpose to:

- give the masonry a high transpiring power ensuring a hygrometric exchange with the environment;
- effectively contrast the disruptive effect and the formation of efflorescence caused by the rising and migration of salts;
- make the masonry repellent to water coming from the outside (rain, moisture, etc.).

MAIN FIELDS OF APPLICATION

MasterEmaco N 235 is designed as an indoor and outdoor plaster to dehumidify masonry.




CHARACTERISTICS

MasterEmaco N 235 is characterised by:

- white or grey colour;
- water repellent action
- strong ability to "capture" the capillary rising water;
- high ability to accumulate salts inside the mortar and transfer moisture to the outside;
- the system meets the "RESTORATION PLASTERS" requirements indicated in the EU regulatory document UNI EN 99/1.

- thermal insulation properties to contain heat loss by reducing the risk surface condensation and the consequent formation of mould;
- no reaction to fire: the material is not combustible and does not produce fumes.
- ease of use: it can be applied by trowel and by spraying, thanks to its high thixotropy.

In compliance with the European Regulation (EU No 305/2011 and EU No. 574/2014) the product is provided with the CE marking according to UNI EN 998-1 and the relative DoP (Declaration of Performance).

 1305
EN 998-1
Restoration mortar (R) for indoor/outdoor plasters used on damp masonry walls containing Salts soluble in water.

CONSUMPTION

Consumption: 10 kg/m² per cm of thickness

PACKAGING

20 kg bag.

STORAGE

Store the product in a dry and sheltered place at a temperature anywhere between 5 and +35°C.

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APPLICATION THICKNESS

MasterEmaco N 235 can be applied in different thicknesses depending on the type of environmental aggression. In particular:

Recommended thicknesses	Degree of impregnation of the salts and of moisture in the masonry (to be verified through on-site analysis)	
	Average	High
Rough coat	3 – 5 mm	
MasterEmaco N 235	1 – 2 cm	1.5 - 2.5 cm
MasterEmaco N 235 (second layer)	-----	1 – 1.5 cm

Technical Information			
Colour of mix	White or grey		
Mixing ratio	3.7-4.3 l for bag (18.5-21.5%)		
Consistency of mix	Tixotropic		
Temperature of application	from 5°C to 35°C		
Pot life of mix	60 minutes		
Packaging	25 kg bag		
Coverage	1.0 kg/m ² for 1 mm		
Maximum thickness	30 mm		
Minimum thickness	10 mm		
Essential characteristic in accordance to 998-1 with a dosage of water of 20%		Performances	
		white	grey
Vapor diffusion coefficient	UNI EN 1015/19	$\mu = 8$	$\mu = 13$
Capillary absorption in 24 hours	UNI EN 1015/18	W24 = 1,30 kg/m ²	W24 = 1,25 kg/m ²
Water penetration depth in 24 hours,	UNI EN 1015/18	1,48 mm	1,00 mm
Voids of ventilation,	UNI EN 1015-7	> 25%	> 25%
Total porosity,	NorMaL 4/80	> 50 %	> 50 %
Thermal conductivity	UNI EN 1745	$\lambda = 0,347$ W/mK	$\lambda = 0,341$ W/mK
Compression strength,	UNI EN 1015/11	5,0 N/mm ² Class CS II	4,8 N/mm ² Class CS II
Bending strength,	UNI EN 1015/11	2,48 N/mm ²	2,45 N/mm ²
Adhesion to the substrate	UNI EN 1015/1	> 0,40 N/mm ² Failure mode A	> 0,46 N/mm ² Failure mode A
Fire reaction	EN 13501	Euroclass A1	Euroclass A1

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APPLICATION SHEET

PREPARING THE SUBSTRATE

- Damaged plaster must be removed with a chisel or hammer up to a height of at least 50 cm beyond the maximum level (visible or detected with specific instrumentation such as a hygrometer), marked by the aggression of moisture and crystallisation of salts;
- brush the substrate with a wire brush to remove dirt, loose material and any salts on the surface;
- remove any degraded or loose bedding mortar;
- draw the missing mortar joints or fin the new bricks again using the same product MasterEmaco N 235, taking care to properly saturate the substrate;
- the substrate must be repeatedly cleaned and saturated with water to favour the discharge of the salts and to create the best conditions for the application of the dehumidifying plaster.



TEMPERATURE

MasterEmaco N 235 can be used when the environment and substrate temperature is between +5°C (even in the 2 hours following the application) and +35°C.

APPLICATION OF THE ROUGH COAT

We recommend carrying out a rough coat.

The same MasterEmaco N 235, with a slightly more fluid consistency, can be used as rough coat.

The amount of mixing water to be used with MasterEmaco

Wait for the rough coat to finish the initial hardening/setting before applying the MasterEmaco N 235 restoration plaster.

APPLICATION OF THE RESTORATION PLASTER MasterEmaco N 235

The mortar can be applied by hand or by spraying with a continuous cycle plastering machine.

1. APPLICATION BY HAND

- Mix with clean water only in the ratio of 18.5%-21.5% to the weight of the dry product; mixing can be done with power drill or cement mixer for 5 minutes until a plastic, smooth mixture which is free of lumps and sufficiently ventilated is obtained. Hand mixing is strongly discouraged.



- after hardening of the rough coat on the damp substrate, apply a 1.5-2 cm macro-porous layer of plaster by trowel;



- level with an aluminium straight edge with a knife profile;

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- once the required consistency has been reached, float the surface with a wet sponge float;



- if the maximum thickness of 3-3.5 cm is to be applied, once hardened and roughened and moistened with water, subsequent coats must be applied at a thickness not exceeding 1-1.5 cm.



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HARDENING

In the case of summer temperatures and during windy days, in order to avoid the formation of cracks from plastic shrinking or "burns" for too rapid hydration, the fresh plaster must be protected and hardened by spraying water. Also, protect the fresh plaster from contact with rain to avoid damaging it.

FINISHES

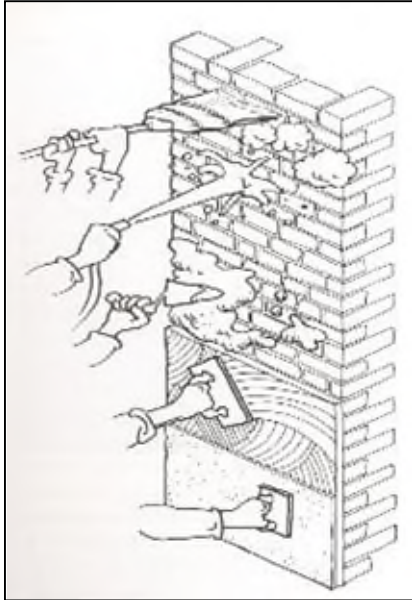
Under optimal hardening conditions, (with $T=+20^{\circ}\text{C}$ and with $R_h = 60\%$), after at least 5 days, the finishing layer can be applied.

2. APPLICATION BY SPRAYING

- mixing can also be performed by normal plastering machine with a continuous cycle for pre-mixed using post-mixing devices that ensure a minimum mixing time;
- In case of a rough coat, after its hardening on damp substrate, apply the material with a continuous cycle plastering machine that ensures a minimum mixing time;

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SAFETY INSTRUCTION

For information on the correct and safe use, transport, storage and disposal of the product, consult the most recent Safety Data Sheet.

OTHER SERVICES

For price analysis, specifications, supplementary brochures, references, reports and technical assistance, visit the website www.master-builders-solutions.com/it-it or contact infomac@mbcc-group.com.

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This version supersedes all the previous ones.