

MasterEmaco N 515 FC



Universal shave. High durability, high resistance to cracking for applications on all civil building substrates in thicknesses from 1 to 5 mm.

MATERIAL DESCRIPTION

MasterEmaco N 515 FC is a single-component, modified polymer mortar for leveling and finishing the surface of concrete and in general for applications on the most common substrates on civil building structures.

Mixed with water, it forms a dough with a very fine creamy consistency and excellent workability.

The innovative formulation creates a sort of slow-release "internal water tank" that allows for better maturation, drastically reducing the tendency to crack and allowing application even on particularly absorbent substrates

FIELDS OF APPLICATION

MasterEmaco N 515 FC is the ideal product for the precision finishing of old plasters, even partially restored, of facades made with scratched plastic finishes or pigmented quartz coatings and for smoothing traditional cement plaster and exposed concrete.

Thanks to its high thixotropy, the product can be easily applied by hand or by spraying even on vertical surfaces and overhead with a minimum thickness of 1 mm up to a maximum of 5 mm.

MasterEmaco N 515 FC can be considered a universal smoothing compound as, thanks to its versatility of use and characteristics, it is successfully used for smoothing cement, bastard mortar and lime plasters, making it particularly useful for maintenance. of facades of civil buildings.

The mortar can be used:

- on concrete.
- on cementitious plasters;
- on bastard mortar plasters;
- on lime mortar plasters;
- on well anchored plastic coatings and existing paints (acrylic, vinyl type).

The pre-existing coatings indicated above must be absolutely consistent, well anchored, solid and clean, so the preparation of the substrate is essential. For any further clarification, please refer to our. technical service.



easi LIFE

The easi LIFE project was born to go beyond the consolidated, proposing an innovative approach to sustainability and able to synthesize in the absolute objectivity of a number the real sustainability of a construction solution that takes into account performance, durability and environmental impact:

$$easi\ LIFE = \frac{Performance + Durability}{Environmental\ impact}$$

easi: Empathetic Added Sustainability Index

LIFE: Low Impact For Environment

FEATURES AND BENEFITS

The peculiar characteristics of MasterEmaco N 515 FC are:

- resistance to cracking in the plastic phase (short term): to combat microcracking in the plastic phase, MasterEmaco N 515 FC contains PAN fibers (in polyacrylonitrile);
- resistance to long-term cracking: this fundamental requirement for the durability of the restoration can be assessed through the O Ring test. MasterEmaco N 515 FC does not show any cracks even after long curing;
- resistance to aggressive environmental agents: it is impermeable to water, sulphates and chlorides and is not subject to degradation phenomena due to the cyclic action of freezing and thawing, thus ensuring greater protection of the reinforcement from corrosion;
- high durability: thanks to its particular formulation, MasterEmaco N 515 FC guarantees effective protection for the reinforcements, avoiding corrosion phenomena due to carbonation and / or in the presence of chlorides.
- high adhesion: it also adheres to simply sandblasted concrete and especially in overhead applications it minimizes waste (ZERO GRAVITY);
- quick paintability: thanks to the fast setting, it can be protected with water-based acrylic film-forming coatings after only 4 hours from application (at 20 ° C);
- high yield and low consumption: 16 kg / m² with a thickness of 1 cm;

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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 1504-3 and 1504-2 and the relative DoP (Declaration of Performance).

CONSUMPTION



The coverage is about 14.5 kg/m² with a coat that is 1 cm thick.

PACKAGING

MasterEmaco N 515 FC is available in 25 kg bags.

STORAGE

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

 1305	 1305
EN 1504-3	EN 1504-2
Cement based mortar (CC) for structural repair of concrete structures	CC mortar for restoring concrete structures based on hydraulic cement. EN 1504-2 methods 2.8 / 8.2.
R1 class	

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Technical Information			
1504-3 class		R1	
Typology		CC	
Chloride content EN 1015-17		<0.05%	
Colour of mix		Grey	
Mixing ratio		6.0-6.8 l for bag (24-27.2%)	
Consistency of mix		Tixotropic	
Temperature of application		From 5°C to 35°C	
Packaging		25 kg bag.	
Consumption		14.5 kg/m ² for 1 cm	
Workability time (at 20°C)		90 minutes	
Minimum thickness		1 mm	
Maximum thickness in single layer		5 mm	
Essential characteristic in accordance to 1504-2 with a dosage of water of 25.6%		Limits and classes	Performances
Adhesion to concrete	Before thermal cycles, UNI EN 1542 on MC 0.40 type support (with a / c ratio = 0.40) UNI EN 1766		> 1 MPa
	After freeze-thaw cycles with immersion in de-icing salts, UNI EN 13687/1		> 1 MPa
	After storm cycles (thermal shock), UNI EN 13687/2		> 1 MPa
Permeability to water vapor		Class I: Sd < 5 m (Permeable), Class II: Sd > 5 and < 50 m, Class III: Sd > 50 m (Not Perm.)	Sd < 5 m (Classe I)
Permeability to water	Permeability to water vapor	< 0,1 kg·m ⁻² ·h ^{-0,5}	< 0,1 kg·m ⁻² ·h ^{-0,5}
Mechanical resistance a	Impact	UNI EN ISO 6272	Classe I: 4 N·m, Classe II: 10 N·m, Classe III: 20 N·m
	Abrasion	UNI EN ISO 5470/1	Weight loss < 3000 mg
	Compression	UNI EN 12190	Class I □ 35 MPa (for traffic with polyamide wheels), Class II □ 50 MPa (for traffic with steel wheels)
Fire reaction	UNI EN 13501/1		A1
Essential characteristic in accordance to 1504-3 with a dosage of water of 25.6%		Limits and classes	Performances
Adhesion to concrete	UNI EN 1542 on MC 0.40 substrate (with w/c ratio = 0.40) according to UNI EN 1766	≥ 1,5 MPa	≥ 1.2 MPa
Water impermeability measured as capillary absorption coefficient	UNI EN 13057	≤ 0,5 kg·m ⁻² ·h ^{-0,5}	≤ 0,5 kg·m ⁻² ·h ^{-0,5}
Compression strength	UNI EN 12190	a 28 gg ≥ 25 MPa	1 g > 3 MPa 7 gg > 10 MPa 28 gg > 13 MPa
Tensile strength in bending	UNI EN 196-1	-	28 gg > 6 MPa

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APPLICATION SHEET

PREPARING THE SUBSTRATE

In general, regardless of the type of support, always check that it is always consistent, free from loose parts, compact and that the surface is clean.

Porous and absorbent substrates must be moistened before application.

For applications on concrete elements it is necessary to remove damaged or contaminated concrete to obtain a suitable surface. Cleaning methods such as sandblasting or sandblasting are recommended.

After preparation of the substrate, the inert material must be clearly visible on the surface of the concrete structure.

An effective mechanical brushing is required for application on cement-based plasters.

On mixed substrates (for example consisting partly of concrete and partly of plaster or masonry) it is advisable that, at the "joints", a fiberglass mesh is incorporated in the smoothing layer, in order to counteract the formation of cracks due to different thermal behavior of the two supports.

It is always advisable to incorporate a glass fiber net into the mixture in order to contain the cracking.

CLEANING AND SATURATION OF CONCRETE

Cleaning and saturation of the substrate concrete must be carried out with pressurised water (80 ÷ 100 atm and using hot water in winter). This operation is crucial in order to prevent the concrete substrate to steal water from the mixture. Inaccurate saturation leads to the loss of adherence and to the cracking of the added material. The use of pressurised water also guarantees effective cleaning of the surfaces in order to remove dust and small inconsistent parts that may be present after the milling of the concrete. The cleaning and saturation of the surfaces are crucial operations for obtaining high adherence values between the substrate and the added material.

APPLICATION TEMPERATURE

MasterEmaco N 515 FC can be applied when the temperature of the environment and of the substrate is between + 5 ° C and + 40 ° C.

When the temperature is 5 ÷ 10 ° C, the development of mechanical resistance is slower; it is advisable to keep the

bags of MasterEmaco N 515 FC in a heated environment and to apply the mortar in the middle of the morning. It is recommended not to apply at temperatures below + 5 ° C. When the temperature is 30 ÷ 35 ° C it is recommended to keep the bags of MasterEmaco N 515 FC in a cool place, to use low temperature mixing water, to apply the mortar in the coolest hours.

PREPARING THE MIXTURE

The mixing is carried out using a low speed whip mixer, in order to avoid an excessive incorporation of air into the mortar. Mixing must continue until a plastic, homogeneous and lump-free mixture is obtained. Hand mixing is strongly discouraged. The premixed mortar is mixed with clean water only and the quantity will be 6.0 - 6.8 liters per 25 kg bag depending on the consistency required. Pour part of the required water into a suitable clean container and add all the powder.

Then mix everything and gradually add the remaining water until the desired workability is achieved, then mix again for a short time, adjusting the consistency as needed.

Never exceed the maximum amount of water.

APPLICATION

The surface must be saturated with water but a dry surface (without stagnant or excess water).

The material can be applied manually with a single layer of stainless steel trowel for thicknesses ranging from 1 to 5 mm.

The material can be applied by spraying with a suitable machine (excluding the use of continuous cycle machines).

FLOATING

Proper floating is essential to effectively counter the formation of micro-cracks resulting from plastic shrinkage. Floating must be applied with a sponge float after sufficient time has elapsed following the application, depending on the weather.

The time interval between the application and the float finish depends on the first hardening phase of the mortar, which is determined by placing your hand on the surface and your fingers do not sink but leave a light mark on the mortar.

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PROTECTION

To lengthen the useful life of the structure, enhancing durability even in areas which require no maintenance, it is always recommended to apply a protective system of the MasterProtect line on the entire structure. This acts as a barrier to the entrance of aggressive environmental agents, also improving the aesthetic appearance of the structure.

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.

Scan the QR code to visit the product page and download the latest version of this datasheet.



Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System compliant with the UNI EN ISO 9001 Standard. Furthermore, the Environmental Management System is certified according to the UNI EN ISO 14001 Standard and the Safety Management System is certified according to the UNI ISO 45001 Standard.

Master Builders Solutions Italia Spa

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June 2021

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Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.