

MasterProtect 325 EL

Water-based elastomeric protective with high crack bridging Class A4 and UV resistance, very low dirt pick-up for the film-forming protection of reinforced concrete and civil buildings.

MATERIAL DESCRIPTION

Water-based acrylic resin, single-component, with a high solids content by volume, elastic, ready for use. Applied by roller or spray directly on the structure previously treated with its specific primer, MasterProtect 325 EL creates a film-forming coating with crack bridging ability with a high protective capacity against the aggressors of reinforced concrete.

FIELDS OF APPLICATION

MasterProtect 325 EL is indicated for the protection of both healthy and repaired reinforced concrete elements and structures with the products of the MasterEmaco line and of civil, industrial or residential masonry and as a finish for “external insulation” systems.

MasterProtect 325 EL is not suitable for the protection of structures subject to permanent contact with water.

FEATURES AND BENEFITS

The peculiar characteristics of MasterProtect 325 EL are:

- protects against the risks of penetration;
- preventing the entry of water allows you to counteract any corrosion processes of the reinforcements linked to the entry of, for example, chlorine ions and the degradation of the concrete connected to the alternation of freeze and thaw cycles;
- carbon dioxide over time causes the concrete to lose its natural ability to passivate the reinforcements with the consequent risk of corrosion. The protective makes the access of such aggressive person impervious;
- crack bridging ability: this “crack resistance” feature allows the protective layer to remain intact through existing cracks in the conglomerate. This requirement can be important for specific conditions. To obtain this performance it is necessary to apply the material for a thickness of at least 400 µm;
- contains anti-algae for better maintenance of the treated surfaces;
- controls the moisture content and increases the electrical resistivity: a high permeability to water vapor is essential to avoid the generation, as the temperature changes, of
- vapor tensions at the interface between protective and concrete, capable of causing detachment. Furthermore, the continuous loss of internal humidity, made possible through the natural transpiration of the support not hindered by the protective, combined with

the impermeability of the coating itself, makes the reinforced concrete intrinsically more resistant than the corrosion phenomena of the reinforcements thanks to a gradual and constant increase. the electrical resistivity of the concrete;

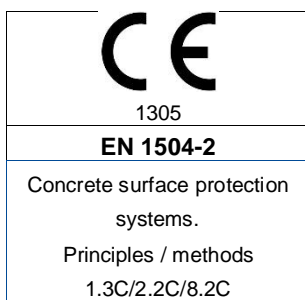
- resists UV radiation: this feature is especially important for outdoor applications;
- adheres excellently to the substrate.



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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 AND PACKAGING

MasterProtect 325 EL should be applied in thicknesses between 200 and 400 µm of dry film, depending on the aggressiveness of the environment and the degree of protection you want to achieve. The consumptions shown below are indicative, the real ones depend on the execution methods and the nature and roughness of the substrate.

MasterProtect P 310

- Consumption: 0,05 - 0,10 l/m²
- Packaging: 20 liters can
- Dilution with water: from 1: 5 to 1:10

MasterProtect 325 EL

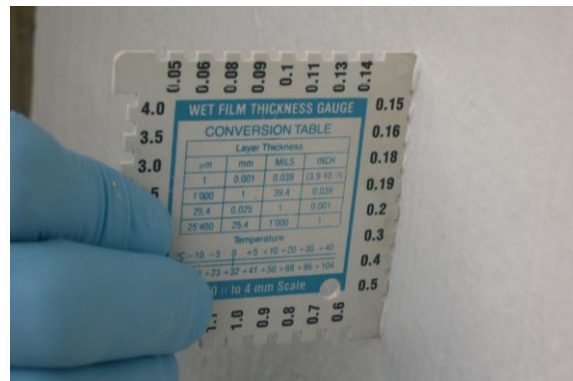
Dry film thickness (µm)	Consumption (l/m ²)
150	0,30
200	0,40
300	0,60
400	0,80

- Packaging: 14 liter buckets
- Color: all RAL colors
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To achieve the desired dry film thickness it is necessary to follow the following table which links the dry film thickness with the wet film thickness, through the solids content by volume of the protective.

Dry film thickness (µm)	Wet film thickness (µm)
150	240
200	320
300	480
400	640

The wet film thickness can be measured with the specific micrometer.



STORAGE

MasterProtect 235 EL must be stored in a covered and dry place at a temperature between 5 and 35 ° C.

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Technical Information MasterProtect P 310		Technical Information MasterProtect 325 EL	
Specific weight:	1.00 ± 0.05 kg / liter	Density	1.34 ± 0.05 Kg / liter
Dry residue by weight (110 ° C):	29.5% ± 2	Solids by volume,%	63 ± 2%
Viscosity (Brookfield):	Not detectable	Operating temperature	-20 ÷ + 80 ° C
Drying times	Touch dry: 1 hour	Drying times:	Touch dry: 2-3 hours
	Recoatable: 4-6 hours (times may vary based on environmental conditions)		Recoatable: 8-12 hours
Flash point (DIN 53213):	Not relevant	Complete hardening (20 ° C, 65% RH)	(times may vary based on environmental conditions)
		Viscosity (Brookfield)	14500 cPs
Technical Information			
Dilution ratio		From 1:5 to 1:10	
Color		RAL colors	
Applicable thickness		From 150 to 400 µm of dry film	
Application temperature		From + 5 ° C to + 40 ° C	
Workability time		60 minutes	
Essential characteristic according to UNI EN 1504-2 with 200 micron of dry film thickness		Limits and classes	Performances
Adhesion to concrete	UNI EN 1542 on reference substrate MC (0.40) with a / c ratio 0.40 as specified in UNI EN 1766	For rigid systems with no traffic: > 1 MPa	> 3 MPa (type A breakdown: lack of substrate cohesion)
Water vapor permeability - equivalent air thickness	UNI EN ISO 7783/2:	For the permeability condition: Sd <5 m	Sd < 0,79 m
Water impermeability measured as a capillary absorption coefficient	UNI EN 1062/3	<0.1 kgm-2h-0.5	<0,01 kg·m-2·h-0,5
Permeability to CO2 -equivalent air thickness	UNI EN 1062/6:	Sd> 50 m	Sd > 115 m (µ > 315.000)
Static crack bridging ability (23 ° C) with coating thickness of 400 µm	UNI EN 1062/11	Classes A1, A2, A3, A4, A5	A4 (cracks > 1.25 mm)
Dynamic crack bridging ability (23 ° C) with coating thickness 300 µm (Wo = 0.50 mm, Wu = 0.20, n = 1000, f = 0.03 Hz, w = 0.30 mm)	UNI EN 1062/7 (metodo B)	Classes B1, B2, B35	B4.1
Thermal compatibility (freeze-thaw cycles with de-icing salts)	measured as adhesion UNI EN 1542 after 50 cycles UNI EN 13687/1 on MC 0.40 type support with water / c ratio = 0.40 according to UNI EN 1766	For rigid systems with no traffic: > 1 MPa	> 3 MPa
Resistance to exposure to artificial atmospheric agents (UV radiation and relative humidity)	UNI EN 1062/11 after 2000 hours of artificial weather	No swelling, no cracking, no flaking	No swelling, no cracking, no flaking
Dirt outlet	UNI 10792	--	4,53 (Low)

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APPLICATION SHEET

PREPARING THE SUBSTRATE

In case of need of protection of reinforced concrete structures only, before applying the primer it is essential to check that the concrete surfaces are not degraded and / or contaminated by oils, greases or other substances, in which case it is necessary to first remove of incoherent and contaminated concrete and then to restore it with products from the MasterEmaco line.

The product must be applied on previously sandblasted surfaces (this operation is not necessary for areas restored with MasterEmaco products) and subsequently cleaned and dusted with pressurized air.

TEMPERATURE

The application can take place when the ambient temperature is between 5 and 40 ° C, it is not recommended to apply at a lower temperature because the drying of the product would be very slow.

APPLICATION OF THE PRIMER

The primer should only be used on fully cured concrete or repair mortar. Before applying the primer, it is essential to check that the concrete surfaces are not degraded and / or contaminated by oils, greases or other substances, in which case it is necessary to first remove the incoherent and contaminated concrete and then restore it with the products of the MasterEmaco line.

The MasterProtect P 310 primer must be suitably diluted and applied to previously sandblasted surfaces (this operation is not necessary for areas restored with MasterEmaco products) and subsequently cleaned and dusted with pressurized air. After applying the primer, it will be necessary to wait until the material has gone "out of touch", about 3 hours in standard environmental conditions (20 ° C, 65% RH), to proceed with the application of the MasterProtect 325 EL finish.

APPLICATION

Before application, the product must be thoroughly mixed with a low speed drill. If necessary, MasterProtect 325 EL can be diluted up to a maximum of 5% with drinking water. The product can be applied with airless or roller. In the case of airless application in a single coat, the recommended dry thickness of 200-300 μm can be applied. However, it is advisable to always apply the

product in two successive coats, spaced by a minimum time of 24 hours, in optimal environmental conditions (20 ° C ÷ 65% RH), which rise to 48 hours for low temperatures and high relative humidity.

Moisten the support before application if the temperature is above 35 ° C.

Do not apply the product on sunny walls and protect the treated surfaces for at least 48 hours from rain.

It should be emphasized that if the protective application takes place in non-optimal environmental conditions, its final performance will also be achieved over a longer period of time.

Airless spray equipment	
Equivalent nozzle diameter	0,021 - 0,023 in
Spray angle	50 ÷ 80 °
Pressure at the nozzle	150 ÷ 180 bar

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.



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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

Via Vicinale delle Corti, 21 – 31100 Treviso – Italia
T +39 0422 429200 F +39 0422 421802
www.master-builders-solutions.com/it-it
e-mail: infomac@mbcc-group.com

For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

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.