

product data sheet

VERSION 1.0

Trasparent fully aliphatic, polyurethane liquid membrane for waterproofing & protection.

DESCRIPTION

MAC CRYSTALLINE is a one component high solids, polyurethane fluid. which cures with the humidity in the atmosphere. It produces an elastic, highly durable, highly hydrophobic membrane with excellent UV resistance. Being aliphatic, it does not yellow/discolour when exposed to sunlight. It is based on pure elastomeric, hydrophobic, aliphatic polyurethane resin. which results in excellent mechanical, chemical, thermal, **UV** and natural element resistance properties. Apply with roller in one or two coats. Minimum total consumption: 0.2-1.0 kg/m2 according to application type.

MAC CRYSTALLINE

RECOMMENDED FOR	FEATURES & BENEFITS
Waterproofing and protection of:	□ No thinning is required but SOLVENT
□ Tiles	may be used.
□ Natural Stone	 Excellent weather and UV resistance.
□ Wood	 Excellent thermal resistance, the
 Verandas and Balconies 	product never turns soft.
□ Terraces	Max service temperature 80 oC,
Also suitable for sealing concrete:	max shock temperature 200 oC.
Applied in thick, bubble-free, coats.	☐ Resistance to cold: The film remains
	elastic even down to -40 oC.
LIMITATIONS: Not recommended for:	 Excellent mechanical properties.
☐ Unsound substrates.	 Good chemical resistance.
☐ Non-porous substrates, such as	Water vapor transmission.
ceramic tiles	 Can also be applied in thick, bubble-
must be primed first.	free, coats.
☐ Porous substrates, such as marble,	
natural stones must be primed with first.	
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APPLICATION PROCEDURE

Can be successfully applied on:

Tiles, concrete, cement roof tiles, wood, corroded metal, galvanized steel. For information about other substrates, please contact our tech department.

Concrete substrate conditions (standard):

- Hardness: R28 = 15 MPa. Humidity: W < 10%.
- Temperature: 5-35 oC. Relative humidity: < 85%.
- Primer selection for special conditions and substrates: Please refer to the Primer Selection Table. Clean the surface using a high-pressure washer, if possible. Remove oil, grease and wax contaminants. If used for concrete sealing, cement laitance, loose particles, mould release agents, cured membranes must also be removed.

Priming:

Priming is required when application is on **non-porous** substrates, such as ceramic/glazy tiles. It is applied at a low consumption of 50-60 ml/m2 with a clean cloth without leaving any pools of fluid (apply as if wiping the surface). For porous substrates such as marble, coto, natural stones, fully aliphatic primer should be applied at max 200 ml/m2.

Stir well, manually or with a low speed mixer. No thinning is required but SOLVENT may be used Application: MAC CRYSTALLINE is applied as soon as PRIMER dries (after 15-20 min) with roller in one or two coats. Do not leave more than 24 hours between coats. In cases of porous substrates MAC CRYSTALLINE should be applied not earlier than 12 hours and not later than 2 days.

Certified quality, environmental and occupational health & safety management systems: ISO 9001/14001 & OHSAS 18001. MAC CRYSTALLINE/EE/1-1-18



APPLICATION PROCEDURE

Although MAC CRYSTALLINE looks coloured, especially when it is in large containers, it is stressed that the end result is, indeed, transparent.

CONSUMPTION

Minimum total consumption: **0.2-1.0 kg/m2** according to application type.

CLEANING

Clean tools and equipment first with paper and then using SOLVENT.
Rollers will not be re- usable.

PACKAGING

- 1 kg
- 5 kg
- 20 kg
- 200 kg drums

SAFETY INFORMATION

Can be kept for 12 months minimum in the original unopened pails in dry places and at temperatures of 5-250 C.

Once opened, use as soon as possible.
Contains a small quantity of volatile flammable solvents. Apply in well-ventilated, no smoking areas, away from naked flames. In closed spaces use ventilators and carbon active masks. Keep in mind that solvents are heavier than air so they creep on the floor. The MSDS (Material Safety Data Sheet) is available on

request.



TECHNICAL SPECIFICATIONS

In liquid form (before application):









30% dry matter in Xylol.		I	
PROPERTY	UNITS	METHOD	SPECIFICATION
Viscosity (Brookfield)	cР	ASTM D2196-86, @ 25 oC	1,000
Specific weight	gr/cm3	ASTM D1475 / DIN 53217 / ISO 2811, @ 20 oC	1.0
Solids	%	internal	80-85
Flash point	оС	ASTM D93, closed cup	42
Tack free time, @ 77 ^o F (25 ^o C) & 55% RH	hours	All .	6
Recoat time	hours	-	6-24

In cured form (after application):

PROPERTY	UNITS	METHOD	SPECIFICATION
Service temperature	oC	-	-40 to 80
Max. temperature short time (shock)	оС	-	200
Hardness	Shore D	ASTM D2240 / DIN 53505 / ISO R868	40
Tensile strength at break @ 23 oC	Kg/cm2 (N/mm2)	ASTM D412 / EN-ISO-527-3	350 (35)
Percent elongation @ 23 oC	%	ASTM D412 / EN-ISO-527-3	> 350
Water vapor transmission	gr/m2.hr	ASTM E96 (Water Method)	0.8

QUV Accelerated Weathering Test (4hr UV, @ 60 oC (UVB- Lamps) & 4hr COND @ 50 oC)	-	ASTM G53	passed (3,000 hours)
Thermal resistance (100 days @ 80 °C)	-	EOTA TR011	passed

Chemical (hydrolysis) resistance:

Potassium Hydroxide, 8%	10 days @ 50 oC	unaffected
Sodium Hypochlorite, 5%	10 days	unaffected
Water absorption	-	< 1.4%



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