MARISEAL®420

Aliphatic Polyurethane Top-Coat, UV-stable Public Pedestrian & Vehicular Traffic Areas

TECHNICAL DATA SHEET
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Product Description

The MARISEAL® 420 is a pigmented, wear resistant, semi-rigid, color & UV stable, weather-stable, cold applied and cold curing, polyurethane coating used as a top-coat for protection over exposed waterproofing coatings, subject to high wear conditions.
Cures by reaction with ground and air moisture over a unique moisture triggered chemical reaction.

Product Information

- One-component, solvent-based, moisture-cured cold applied and cold-curing aliphatic polyurethane

Packaging

- 1/5/10/20 kg metal pails

Color

- White / Light grey / Silver Grey / Transparent/ Other colors available upon request

Shelf Life

- 9 months from date of production

Storage Conditions

- Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5º-35ºC. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Advantages

- Simple application (roller or airless spray)
- Resistant to constant, heavy abrasion.
- Colour & UV stable
- Gives a glossy and easy-to-clean surface
- No chalking effect.
- Resistant to stagnating water, heat and frost
- Maintains its mechanical properties over a temperature span of -40ºC to +90ºC
- Resistant to heavy traffic (vehicular & pedestrian)

Uses

MARISEAL® 420 is used as a top coat, over the MARISEAL® waterproofing membranes, or as a simple protective coat in applications requiring high mechanical strength and UV-resistance due to conditions of use.

As part of the waterproofing system for:

- Exposed car parking areas
- Public pedestrian traffic areas
- Surfaces subject to high mechanical stress due to conditions of use

As a protective coat:

- Over non-slip floors
- For marking / decorating
- On metal roofs

Consumption

- 0,400 – 0,600 kg/m² in two layers

This coverage is based on practical application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature, humidity, application method and finish required can alter consumption.

Certifications

EN13813: Screed material and floor screed: 0.6 kg/m²

Technical Data*

PROPERTY	RESULTS	TEST METHOD
Resistance to Water Pressure	No Leak	DIN EN 1928
Elongation at break	150%	ASTM D412
Tensile strength	>20 N/mm²	ASTM D412
Surface chalking after 2000h of accelerated aging (DIN EN ISO 4892-3, 400 MJ/m2)	No chalking observed. Chalking grade 0	DIN EN ISO 4628-6
Adhesion to the MARISEAL® 250	>2 N/mm²	EN 1542
Hardness (Shore A Scale)	90	ASTM D 2240 (15")
UV accelerated ageing, in the presence of moisture	Passed - No significant changes	EOTA TR-010
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change	Inhouse Lab
Service Temperature	-40°C to +90°C	Inhouse Lab
Tack Free Time	1-4 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	12 hours	Conditions: 20°C, 50% RH
Final Curing time	7 days	Conditions: 20°C, 50% RH
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

EN1504-2: Surface protection for concrete (consumption 0.4 kg/m²)

EPD verified

ISO 14001:2015
ISO 9001:2015

Application

Surface Preparation

Careful surface preparation is essential for optimum finish and durability.
The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed.
WARNING: Do not wash surface with water!

Waterproofing membrane

See relevant MARIS POLYMERS SMSA product Technical Data Sheet. Make sure that the last layer is broadcasted with silica sand.

Top-coat application as a waterproofing system

Stir MARISEAL® 420 well before use. Pour MARISEAL® 420 over the cured, aggregate-saturated waterproofing membranes (MARISEAL® 250, etc.), and spread out by squeegee or airless spray. After 5-6 hours (not more than 36 hours) apply a second layer of MARISEAL® 420 using a roller. If necessary, apply a third layer of MARISEAL® 420.

ATTENTION: MARISEAL® 420 must always be used over MARISEAL® 250, which has been previously broadcasted with oven-dry quartz sand or corundum (grain size 0.1-0.3 mm or 0.4-0.8 mm), acting as an adhesion bridge. Owing to the quartz sand on the last MARISEAL® 250 layer, the surface becomes harder and more resistant to mechanical stress.
For best results, temperature during application and curing should be between 5ºC and 35ºC. Low temperature retards curing, while high temperature speeds up curing. High humidity may negatively affect the final finish.

Protective anti-slip top-coat application

Stir MARISEAL® 420 well before use. Pour MARISEAL® 420 over the primed, cured, aggregate-saturated surfaces, and spread out by squeegee or airless spray.
After 5-6 hours (no more than 36 hours) apply a second layer of MARISEAL® 420 by roller. If necessary, apply a third layer of MARISEAL® 420.

ATTENTION: MARISEAL® 420 must always be used over primed surfaces, which have been previously broadcasted with oven-dry quartz sand or corundum (grain size 0.1-0.3 mm or 0.4-0.8 mm), acting as an adhesion bridge. Owing to the quartz sand, the surface becomes anti-slip, harder and more resistant to mechanical stress.
WARNING: MARISEAL® 420 and/or MARISEAL® SYSTEM are slippery when wet. To avoid slipperiness on rainy days, dust the coating with suitable aggregates while it is still wet, to create an anti-slip surface. For more information, please contact our company's Technical Support Department.
WARNING: In cases of stagnant waters, the MARISEAL® system must be regularly cleaned, to prevent biological and microbial attack.

Decorative/metal surface top-coat application

Stir MARISEAL® 420 well before use. Pour MARISEAL® 420 over the primed surfaces and spread out by squeegee or airless spray. After 5-6 hours (no more than 36 hours) apply a second layer of MARISEAL® 420 by roller. If necessary, apply a third layer of MARISEAL® 420.

Safety measures

MARISEAL® 420 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data Sheet. PROFESSIONAL USE ONLY

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