Maris Polymers®
POLYURETHANE SYSTEMS

CONSTRUCTION

MARISEAL® 420

TECHNICAL DATA SHEET
Date: 01.06.2011 – Version 10

Aliphatic Polyurethane Top-Coat, UV-stable
Public pedestrian & Vehicular traffic areas

Product description

The MARISEAL® 420 is a pigmented, wear resistant, semi-rigid, color- and UV-stable, weather-stable, cold applied and cold curing, one component aliphatic 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.

Advantages

- Simple application (roller or airless spray).
- One component.
- Resistant to constant, heavy abrasion and wear conditions.
- Color stable.
- UV stable
- Gives a glossy and easy-to-clean surface.
- Does not show the chalking effect of aromatic polyurethane waterproofing coatings.
- Resistant to water.
- Resistant to frost.
- Maintains its mechanical properties over a temperature span of -40°C to +90°C.
- The waterproofed surface can be walked on (public pedestrian traffic).

Uses

- Waterproofing of Decks and Walkways
- Waterproofing of public Pedestrian Traffic Areas
- Waterproofing of Exposed Car Parking areas
- Waterproofing of surfaces exposed to heavy wear conditions.

Used over the MARISEAL® 250 or 260, on surfaces with high public pedestrian trafficking (e.g. Stadium tribunes) and on surfaces with light car traffic (e.g. Exposed car parking areas)

Consumption

400-500 gr/m^2 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.

Colors

The MARISEAL® 420 is supplied in white, light grey and red.
Other RAL colors may be supplied on demand.

Technical Data *

PROPERTY	RESULTS	TEST METHOD
Composition	Pigmented Aliphatic moisture triggered Polyurethane polymer. Solvent based	
Resistance to Water Pressure	No Leak	DIN EN 1928
Elongation at break	>100%	DIN EN ISO 527
Tensile strength	>5 N/mm^2	DIN EN ISO 527
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/mm^2	ASTM D 903
Hardness (Shore D Scale)	30	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	
Final Curing time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

TÜVRheinland® CERT ISO 9001

TÜVRheinland® CERT ISO 14001

Maris Polymers®
POLYURETHANE SYSTEMS

CONSTRUCTION

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 product Technical Data Sheet. Make sure that the last layer is broadcasted with silica sand.

Top-Coat

Stir MARISEAL 420 well before using.
Apply the MARISEAL• 420 by roller or airless spray in one or two layers.
Allow 3-6 hours (not more than 36 hours) to cure, between the two layers.

ATTENTION: The MARISEAL• 420 must always be used over MARISEAL• 250 / 260, which was previously sprinkled with oven dry silica sand or corundum (corn size 0,1-0,3mm or 0,4-0,8mm) which creates an adhesion bridge. With the silica sand in the last layer of the MARISEAL• 250 / 260, the surface also becomes harder and more resistant to wear conditions.

For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.

WARNING: The MARISEAL• 420 is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface. Please contact our R+D Dept. for more details.
WARNING: If on the surface where the MARISEAL• system is applied, there are areas with ponding water, they should be cleaned on regular basis to avoid biological and microbial attack.

Packaging

MARISEAL• 420 is supplied in 20 kg, 10 kg and 5 kg metal pails. Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Safety measures

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