PRODUCT DATA SHEET

PENECOAT™ CLEAR MAT FINISH

Version, Penetron Hellas 19.01.2023

SATIN-MATT TRANSPARENT LIQUID-APPLIED POLYURETHANE FINISHING COATING

DESCRIPTION

PENECOAT™ CLEAR MAT FINISH is a satin-matt, transparent, semi-rigid, one component, aliphatic polyurethane coating, used for matt finishing over PENECOAT™ CLEAR polyurethane coatings. PENECOAT™ CLEAR MAT FINISH is UV-stable, non-yellowing, abrasion resistant, alkali and chemical resistant. It gives the surface a satin-matt look, while it is cured by air and ground moisture.

PENECOAT™ CLEAR MAT FINISH is using a unique curing system (moisture triggered), and unlike other similar systems it does not react with moisture (moisture0cured) and does not form bubbles.

RECOMMENDED FOR

PENECOAT™ CLEAR MAT FINISH is used as a satin-matt, transparent finishing coating:

- Balconies and terraces
- Ceramic surfaces
- Glass
- Glass-brick walls
- Natural stones
- Transparent plastics (e.g. polyacrylate, polycarbonate)
- Wood and Bamboo
- Porous natural rocks

ADVANTAGES

- Easy application (single component, by roller, brush or airless spray)
- Color stable. No yellowing
- UV stable
- Abrasion resistant
- Resistant to water and frost. Resistant to puddle water
- Provides excellent elasticity. Follows the movements of the surface
- Maintains its mechanical properties over a temperature span of -40 ºC to +90 ºC
- The coated surface can be used for domestic pedestrian traffic
- No chalking effect
- Low cost

TECHNICAL CHARACTERISTICS

Characteristics	Test Result	Test Method
Composition	Aliphatic polyurethane resin	
Color	Clear (satin-matte)	
Tack free time	4-6 hours	Conditions: 20 ºC (68 ºF), 50% RH
Curing time	24 hours	
Final curing time	7 days	

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Technical characteristics of PENECOAT™ CLEAR MAT FINISH

Characteristic	Test Result	Test Method
Elongation at break	200%	DIN EN ISO 527
Tensile strength	>15 N/mm^2	DIN EN ISO 527
Adhesion to PENECOAT CLEAR	>1,5 N/mm^2	EN 1542
Surface chalking after 2000h of accelerated aging (DIN EN ISO 4892-3, 400 MJ/m^2)	No chalking observed. Chalking grade 0.	DIN EN ISO 4628-6
Hardness (Shore D Scale)	25	ASTM D 2240
Permeability to CO_2 (measured in CE system)	0,4 g/m^{2}d	EN 1062-6
Water vapor permeability (measured in CE system)	2,7 g/m^{2}d	EN ISO 7783
Capillary absorption and permeability to water (measured in CE system)	0,009 kg/m^2.h^{0,5}	EN 1062-3
Resistance to water pressure	No leak (1m water column, 24)	DIN EN 1928
Hydrolysis (5% KOH, 7 days cycle)	No significant elastomeric change	Inhouse Lab
Service temperature	-40 ºC to 90 ºC	Inhouse Lab
Chemical properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils	

All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

DIRECTIONS FOR USE

Surface Preparation: The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the coating. Remove all loosing materials. New concrete structures need to dry for at least 28 days. Maximum moisture content should not exceed 5%. Old coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Any loose surface pieces and grinding dust need to be thoroughly removed.

NOTE: Careful surface preparation is essential for optimum finish and durability. Do not wash surface with water.

Mixing: Stir PENECOAT™ CLEAR MAT FINISH, thoroughly, using a mixing drill, prior to application.

Application: Apply PENECOAT™ CLEAR MAT FINISH 18-24 hours after the last layer of PENECOAT™ CLEAR (PENECOAT™ CLEAR must be cured), by roller, brush or airless spray, until all surface is covered, in one layer.

NOTE: Apply PENECOAT™ CLEAR MAT FINISH, not later than 12 hours, after the last layer of PENECOAT™ CLEAR, to achieve maximum bonding between products.

COVERAGE

0,1 kg/m^2 (0,02 lb/ft^2) in one layer.

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

SPECIAL CONSIDERATIONS

For the best results, the temperature application and curing should be between 5 ºC to 35 ºC (41 ºF to 95 ºF). Low temperatures cause curing retardation, while high temperatures speed up curing. High humidity may affect the final finish.

PENECOAT™ CLEAR is slippery, when wet. We recommend dry-shake well graded quartz aggregate (QUARTZ SAND MIX or similar) on fresh material, to create a non-slip surface.

It is highly recommended to apply PENECOAT™ CLEAR MAT FINISH crosswise, by roller.

Hands and tools should be cleaned, before polymerization, with the solvent PENECLEANER™ A PLUS.

Contact PENETRON HELLAS S.A. for further information, regarding your project.

PACKAGING

PENECOAT™ CLEAR MAT FINISH is available in 10 kg (22 lb), 4 kg (9 lb) and 1 kg (2,2 lb) containers.

STORAGE / SHELF LIFE

PENECOAT™ CLEAR MAT FINISH can be stored for 9 months in its original packing (unopened container) at 5 ºC – 35 ºC (41 ºF – 95 ºF) in a cool, dry place. Keep away from wet areas and direct sunlight.

SAFE HANDLING INFORMATION

Flammable. No smoking. Avoid skin and eye contact. If contact is made, flush areas with lots of water and seek medical advice. Protective gloves, mask and goggles should be worn. For further information please refer to Safety Data Sheet. PENETRON HELLAS S.A. has recently updated Safety Data Sheet on the safe use of PENETRON® products. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers. KEEP OUT OF REACH OF CHILDREN.

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CERTIFICATION

CE

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1128-CPR-10.09.0479
DOP NO: 14.013-03-01D160922-05
EN 1504-2
PENECOAT CLEAR MAT FINISH
Surface protection product – coating:
Protection against ingress [Method 1.3]
(Used with PENECOAT CLEAR TILE PRIMER
and PENECOAT CLEAR)
Linear shrinkage: NPD
Coefficient of thermal expansion: NPD
Adhesion by cross-cut test: NPD
Permeability to CO_2: S_D>50m
Water vapour permeability: Class II: 5 m ≤ S_D ≤ 50 m
Capillary absorption and permeability to water: ω < 0,1 kg/m^2.$h^{0,5}$
Thermal compatibility: NPD
Resistance to thermal shock: NPD
Chemical resistance: NPD
Crack bridging ability: NPD
Adhesion strength by pull-off test: ≥ 1,5 (1,0) N/mm^2
Reaction to fire: Class F
Slip / skid resistance: NPD
Behavior after artificial weathering: NPD
Antistatic behavior: NPD
Adhesion on wet concrete: NPD
Dangerous substances: According 5.3

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