

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 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 °C to +90 °C
- ▶ The coated surface can be used for domestic pedestrian traffic
- ▶ No chalking effect
- ▶ Low cost

**TECHNICAL CHARACTERISTICS**

Characteristics	Test Result	Test Method
<i>Composition</i>	Aliphatic polyurethane resin	Conditions: 20 °C (68 °F), 50% RH
<i>Color</i>	Clear (satin-matte)	
<i>Tack free time</i>	4-6 hours	
<i>Curing time</i>	24 hours	
<i>Final curing time</i>	7 days	

**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 <sup>2</sup>	DIN EN ISO 527
Adhesion to PENECOAT CLEAR	>1,5 N/mm <sup>2</sup>	EN 1542
Surface chalking after 2000h of accelerated aging (DIN EN ISO 4892-3, 400 MJ/m <sup>2</sup> )	No chalking observed. Chalking grade 0.	DIN EN ISO 4628-6
Hardness (Shore D Scale)	25	ASTM D 2240
Permeability to CO <sub>2</sub> (measured in CE system)	0,4 g/m <sup>2</sup> d	EN 1062-6
Water vapor permeability (measured in CE system)	2,7 g/m <sup>2</sup> d	EN ISO 7783
Capillary absorption and permeability to water (measured in CE system)	0,009 kg/m <sup>2</sup> .h <sup>0,5</sup>	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 °C to 90 °C	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<sup>2</sup> (0,02 lb/ft<sup>2</sup>) 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 °C to 35 °C (41 °F to 95 °F). 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 PENECCLEANER™ A PLUS.

Contact PENETRON ROMANIA 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 °C – 35 °C (41 °F – 95 °F) 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. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers. KEEP OUT OF REACH OF CHILDREN.

**WARRANTY - DISCLAIMER**

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**CERTIFICATION**

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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<sub>2</sub>: S<sub>D</sub>>50m

Water vapour permeability: Class II: 5 m ≤ S<sub>D</sub> ≤ 50 m

Capillary absorption and permeability to water: ω < 0,1  
kg/m<sup>2</sup>.h<sup>0,5</sup>

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<sup>2</sup>

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