OP-COAT 590

Technical Data Sheet

ORGANIC POLYMER Flooring Systems

Product: Clear Polyurethane Coating
Two-component polyurethane, UV-resistant, transparent, bio-based, very low-emission, free from phthalates and other plasticizers.

Characteristics:

- 50% bio-carbon content
- UV-resistant
- Tough-hard
- Very good chemical and mechanical resistance
- Very good adhesion to OP-Primer 001 N and mineral substrates*
- Physiologically harmless after curing

Use Cases:

OP-Coat 590 is a bio-based, future-oriented, and low-emission PU floor coating, glossy PU sealant, and PU binder for stone granulates for all indoor and outdoor surfaces.
The product is optimized for application and, in combination with the OP-Primer 001 N primer, creates a visually high-quality and durable coating system. OP-Coat 590 can be used in public facilities such as schools, hospitals, shopping arcades, and other buildings with high indoor air quality requirements.

Consumption: 0,3 - 1,0 kg/m²

Resistance:

- Water / Waste water
- Detergents / surfactants
- Wet temperature resistance up to max. 40°C
- Cleaning agents (please consult us)
- Diluted acids and alkalis

Technical Data:

Mixing ratio A : B	35 : 65 by weight
Density (23°C)	approx. 1.2 g/cm³
Volume solids	approx. 100%
Viskosität (23°C)	approx. 1000 mPa·s ± 200
Shore D hardness (DIN EN ISO 868)	approx. 70 – 80

Processing Data*:

Maximum relative humidity at 15°C	75% (dew point distance +3°C)
Maximum relative humidity at 23°C	85% (dew point distance +3°C)
Pot life (15°C / 23°C / 30°C)	approx. 30 min / 20 min / 15 min
Object temperature	minimum 15°C to maximum 30°C
Material temperature	15°C – 25°C
Walkable after curing (15°C / 23°C / 30°C)	24 h / 8 h / 6 h
Mechanically load-bearing after curing (15°C / 23°C / 30°C)	72 h / 48 h / 24 h
Chemically resistant after curing (15°C / 23°C / 30°C)	14 days / 7 days / 5 days

*The figures are laboratory-determined reference values and not specifications.

Packaging:	10 kg container: 3,5 kg Component A; 6,5 kg Component B Other packaging sizes available upon request.
Color:	• Clear
Shelf Life:	12 months when stored cool and dry in the original container at 15 – 25°C. Temperatures below 10°C may lead to crystallization. Please consult ORGANIC POLYMER.

Surface Preparation:
Before coating, the substrate must be prepared using a suitable method, e.g., Blastrac shot blasting.

Minimum Requirements:
- Free from slurry, dust, (oil, grease)*, and adhesion-reducing substances
- Non-absorbent
- Minimum pull-off strength: 1.5 N/mm²

*In consultation with ORGANIC POLYMER.

Depending on the condition of the substrate, it must be prepared pore-free with a primer and/or scratch coat using OP-Primer 001, and may be lightly broadcast with quartz sand. Excess quartz sand and contaminants must be carefully removed.

Processing:
The components, conditioned to at least 15°C, are mixed according to the specified ratio using a slow-speed mixer (300 – 400 rpm) for approx. 3 minutes until homogeneous. The material is then transferred into a clean container and mixed again for approx. 1 minute.
Fillers should only be added after homogeneous mixing. Immediately after mixing, the material must be distributed over the surface and applied evenly in the desired layer thickness using a short-pile roller.

System Example:
The following data applies to substrate and floor temperatures of 15 – 23°C. Higher or lower temperatures affect filler quantities, consumption per m², and may influence appearance.

Primer:
OP-Primer 001 N, transparent
Consumption: approx. 0.25 – 0.5 kg/m²
Lightly broadcast with quartz sand 0.4 – 0.8 mm (approx. 0.5 kg/m²).

Scratch Coat:
OP-Primer 001 N + quartz sand
Consumption: approx. 600 g/m² binder plus quartz sand
Lightly broadcast with quartz sand 0.4 – 0.8 mm (approx. 0.5 kg/m²).

Coating:
OP-Coat 590, clear
Consumption: approx. 0.3 – 1.0 kg/m².

System Layer Thickness: 0,3 - 1 mm.

Professional care further increases the service life of coating systems.

Disposal Instructions:	Uncured products are generally classified as hazardous waste requiring special supervision and must be disposed of properly. In consultation with the relevant authorities or landfill operators, cured material may be disposed of as household/commercial waste. Local authorities provide information regarding proper disposal. Completely emptied packaging must be sent to recycling systems.
Protective Measures:	Further information regarding safety during transport, storage, handling, personal protective equipment, and disposal can be found in the current safety data sheet and in the relevant occupational safety regulations.
GISCODE:	PU10
EU-Regulation "Decopaint-RL":	The maximum VOC content permitted by EU Regulation 2004/42/EC (Category AII / j / Type Lb) in ready-to-use condition is 500 g/l (limit 2010). This product complies with the 2010 EU Regulation.
CE-Marking:	See Declaration of Performance.

CE

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25 | H2N-590-001 | EN 13813:2002 | OP-Coat 590

Synthetic resin screed / synthetic resin coating for indoor use:

Property	**Classification**
Fire behavior	Efl
Release of corrosive substances	SR
Wear resistance	≤ AR1
Adhesion strength	≥ B1,5
Impact resistance	≥ IR4

OP-Coat 590 27.11.25:

Our information and recommendations, whether verbal, written, or based on tests, are provided to the best of our knowledge but are non-binding, including with regard to possible third-party proprietary rights. This information does not release the purchaser from independently testing our products and recommendations for suitability for intended processes and purposes.
Application and processing of our products are beyond our control and are therefore solely the responsibility of the user. Sales are conducted exclusively in accordance with our General Terms and Conditions of Sale, Delivery, and Payment.

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