



U-COAT 850

One-component polyurethane waterproofing membrane, based on LC-Technology bubble-free cross-linking technology

DESCRIPTION

U-COAT 850 is a one-component, semi-liquid polyurethane waterproofing membrane for cold applications. It cross-links by reaction with ambient moisture to form a protective elastic base. **U-COAT 850 is based on LC-Technology, developed to avoid polymerization bubbles present in conventional polyurethanes.** LC-Technology combines the best polyurethane properties with a bubble-free system and very low emissions.

CERTIFIED ACCORDING TO:

EN 1504-2:2005

COMPLIES WITH:

LEED iEQc 4.1; SCAQMD Rule 1168; BAAQMD Reg 8 Rule 51

AREAS OF APPLICATION

U-COAT 850 provides excellent waterproofing of flat, sloping and vaulted roofs, garden roofs, positive buoyancy walls and under cladding (tiles, floating, fixed or floating decks). It ensures safe waterproofing of details such as vertical joints, thresholds, connections, aerators, gutters, etc. In this case, reinforcement with non-woven polyester or glass fibre fabric is required.

Improvement of the durability of roofs, protecting them from degradation and CO₂ with an increase in the life cycle of concrete structures according to EN 1062-6 and damaged roofs in general from rust and decay. Protection of polyurethane foam and insulation panels. Waterproofing of wet areas (under tiles) in bathrooms, kitchens, balconies, auxiliary rooms. Repair of gutters and guttering, protection of masonry and vertical surfaces according to EN 1542, waterproofing of new or existing concrete floors and roofs and bituminous sheathing (at least 6 months after installation). Can be combined with nonwoven fabrics or glass fibre sheets.

NPT srl - Società soggetta a direzione e coordinamento da parte di DGL International (UK) LTD

Headquarter

Via Guida Rossa n. 2 -
Loc. Crespellano
40053 Valsamoggia (BO) - Italy
Tel.: +39 051969109
P. IVA: 03467421206

Production & R&D

Via Stazione 12
27030 Villanova D'Ardenghi (PV) - Italy
Tel.: +39 0382400140

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Not recommended unless specifically treated: tanks, contact with drinking water, constantly submerged areas (if not adequately coated) highly trafficked areas (pedestrians and vehicles) unless reinforced or armoured with quartz, asphalt bituminous surfaces (newly applied), as thin coating or application as paint. A UV protective coating is always recommended.

SPECIAL FEATURES

- No primer required on most building materials
- Can also be used on damp surfaces up to 7% relative humidity
- One-component with 800% high elasticity
- Slight odour (almond smell)
- Non-flammable
- Neutral cross-linking, does not stain or corrode concrete
- Semi-liquid product, easy to apply with professional or non-professional tools such as spatula, brush or rollers
- Applicable even at low temperatures
- Ensures even adhesion and even coverage without interruption, even on uneven surfaces
- Can be combined with nonwoven fabric or MAT to cover details, corners and edges
- Easy to repair in case of damage
- Over-paintable with aliphatic top coats, acrylic paints, PU paints and many epoxy paints
- Extended durability with application of nonwoven or MAT and 3 coats (tot 2.8/3.0 kg/m²)
- In combination with quartz or fine sand (partial or saturated) it can also be used as a high traffic and driveway flooring

TECHNICAL FEATURES

Appearance		Semi-liquid paste
Colour		Light grey
Chemical nature		Polyurethane
Type of polymerisation		Moisture curing
Hardness Shore A <i>(DIN 53505)</i>		Ca. 56

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Density <i>(Method NT06) (23°C and 50% R.H.)</i>	<i>g/cm³</i>	Ca. 1.39
Tack free time <i>(Method NT17) (23°C and 50% R.H.)</i>	<i>min.</i>	Ca. 130
Elastic modulus at 100% <i>(ISO 37 DIN 53504)</i>	<i>N/mm²</i>	Ca. 2.2
Tensile strenght <i>(ISO 37 DIN 53504)</i>	<i>N/mm²</i>	Ca. 4.0
Elongation at break <i>(ISO 37 DIN 53504)</i>	<i>%</i>	Ca. 800
Vapour permeability <i>(DIN 52615)</i>	<i>g/hm²</i>	< 0,6
Optimum application temperature	<i>°C</i>	From +5 to +40
Temperature resistance	<i>°C</i>	From -40 to +100

APPLICATION

Always ensure that the substrate is sufficiently clean and free of oil and grease. If present, cavities or empty joints must be filled or sealed with a suitable product from the U-SEAL or SiMP SEAL range or use U-COAT 850 in combination with filler or rolled nonwoven. If present, critical surface parts such as cracks, expansion joints and highly stressed parts, nonwoven or MAT should be used.

Storage: stored from +15°C to +25°C

Packaging: 21kg drum (with anti-rib cap)

Application climate and temperatures: processing temperature between +5°C to +35°C.

It can also be used at temperatures below +5°C, in which case it should be noted that the drying and viscosity of U-COAT 850 may increase as it no longer has a self-levelling effect.

Bear in mind if the substrate or ambient temperature is above 35°C, the product may slip and/or drip from vertical surfaces.

When planning the work, check the weather forecast so that no rainfall occurs during the curing process for at least two hours after application. However, in the event of rain 130 minutes after application, U-COAT 850 will have developed a skin and the product will not be washed away.

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Surface appearance and preparation: surfaces must be clean and undamaged, with moisture content less than 7% free of standing water, oil, grease, release agents and rust. As a rule, substrates must be prepared according to the above-mentioned NPT guidelines; indications of adhesion on specific surfaces can be obtained by sending substrate samples to our laboratories for analysis. Remove all loose particles or residues with compressed air, sandpaper or a brush. Do not apply to sharp or pointed points. Any surface irregularities must be smoothed out. Good cleanliness is essential for good adhesion. Always test substrates.

Mineral and porous substrates such as concrete, asbestos cement, bricks: The substrate must be healthy, non-flaking and free of dust, dirt and loose particles. If necessary, the surface must be cleaned with a damp cloth. Permanently wet surfaces must be dried before application. The maximum moisture content must not exceed 7% / 8% max. New concrete structures must dry for at least 28 days, however with a moisture content not exceeding 7% /8%.

Preparation for joint-details and cracks: careful sealing of existing cracks and movement and connection joints prior to application is extremely important for lasting waterproofing results. Fill all cracks with a sealant from our U-SEAL range. If necessary, protect sealed cracks with non-woven fabric soaked in U-COAT 850, also applied fresh on fresh to the sealed joint. To avoid three-sided adhesion and to achieve adequate sizing, the joints must be filled with a closed-cell joint filler. Smooth the U-SEAL sealant within the specified skin formation time using a trowel. Do not use smoothing agents, this may adversely affect adhesion between U-SEAL and U-COAT 850. In areas particularly prone to cracking or other problems, such as wall-floor joints, 90° angles, chimneys, pipes and siphons, it is recommended to insert a non-woven fabric soaked and saturated in U-COAT 850 and press it gently into the first wet layer immediately after application. **After at least 4h and no more than 48h, the second coat can be applied.**

U-COAT 850 is ready to use and can be applied by roller, brush or spatula directly from the bucket. In this case, ensure that no dirt is introduced into the container. Mask the area or details using masking tape. Finish the edging by removing the tape. After waiting at least 4 hours and no more than 48 hours, the second coat can be applied in the same way as the first coat. If using the non-woven insert, use enough product to cover the fabric that should no longer be visible on the surface.

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APPLICATION OF THE PROTECTIVE LAYER (TOP COAT)

The best possible resistance of U-COAT 850 surfaces exposed to UV light and abrasion can be achieved by sprinkling about 2-3 kg/m² of quartz sand in a mixture of your choice of grain size to create a solid coating. Quartz sand finishing is strongly recommended in demanding applications where a long service life is expected or where high UV resistance and solar reflectivity is required, such as in tropical climates.

U-COAT 850 is generally over-paintable, but considering the wide range of paint formulations, it is strongly recommended to test their compatibility. Pay particular attention to paint products based on alkyd resins as the stabilisers in the sealant can significantly slow down the drying time of the paint. CAUTION: the hardness and thickness of the paint film may be affected by any elastic movements of the coupling and lead to cracking of the film itself.

CONSUMPTION

The following are the minimum recommended consumptions in order to reach the thickness for the material to be effective

1st layer: ca. Da 0,3 kg/m² slightly thinned to be applied as a primer (or for nonwoven application)

2nd layer: ca. 0,6 kg/m²

3rd layer: ca. 0,6 kg/m² as a finish

Surface finishing with sand dusting may require an additional layer of 0,2 kg/m²

EQUIPMENT CLEANING AND PERSONAL PROTECTION

Clean used tools with ethyl alcohol. When the product has not yet hardened, it can be removed from the tools using paper or a cloth. Once hardened, it can only be removed mechanically.

Avoid skin contact by using protective rubber or polyethylene gloves. In case of contact with skin, wash with soap and water.

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FORMATS

Description	Pieces
21 kg aluminium drum	1

SHELF LIFE AND PRESERVATION

U-COAT 850 can be stored for 12 months in the original packaging, in a cool, dry place with a temperature between 10°C and 25°C. Keep away from sources of moisture, heat sources and direct sunlight.

GENERAL INFORMATION

The information contained in this technical data sheet is to the best of our knowledge correct, being based on our knowledge and experience to date and cannot be used as a guarantee, due to the various different materials present on the market and the fact that the application conditions are not under our direct control and supervision. NPT srl, however, guarantees constant product quality. NPT srl, has the right to modify or up-date this technical data sheet according to requirements. Customers are kindly requested to verify that they are in possession of the latest version.

ALWAYS CONSULT THE MATERIAL SAFETY DATA SHEET BEFORE USING THE PRODUCT

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