Technical Data Sheet U-Coat 850
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U-Coat 850

One part polyurethane waterproofing membrane
NPT bubble-free curing LC-Technology

DESCRIPTION

U-Coat 850 is a premium, liquid and cold applied, one-part polyurethane waterproofing membrane. It cures by reaction with ambient moisture to form a strong protective base. U-Coat 850 is based on NPT new and advanced LC-Technology, developed to avoid bubbling present in traditional one-part PU sealants. LC-Technology combines the best properties of traditional polyurethane sealants toa bubble-free curing system and very low emissions.

Certified according to:
EN 1504-2:2005

Compliant to:
LEED iEQc 4.1; SCAQMD Rule 1168; BAAQMD Reg 8 Rule 51

AREAS OF APPLICATION

Improvement of the durability of the roofs over time by protecting them from rust and decay, protection from CO2 and prolongation of the life cycle of concrete structures according to EN 1062-6. Extension of the life cycle of roofs damaged in general by rust and decay. Protection of polyurethane foam and insulating panels. Waterproofing of wet areas (under-tile) in bathrooms, kitchens, balconies, auxiliary rooms. Repair of gutters and downspouts, protection of masonry and vertical surfaces according to EN 1542, waterproofing of new or existing concrete floors and roofs.

Not suitable for: tanks, contact with drinking water, areas under constant immersion, highly trafficked areas (pedestrians, vehicles), asphalted bituminous surfaces (recently applied), as a thin coating or application as a paint. A UV protective coating is always recommended.

FEATURES

- It does not need a primer on most building materials
- Can be used on damp surfaces
- One component
- Odourless
- Neutral curing, does not stain or corrode the concrete
- Liquid: easy to apply with professional tools such as spatula, brush or rollers
- Cold application: in any situation or climate

NPT srl
Headquarter
Via Guido Rossa n.2 - Loc. Crespellano
40053 Valsamoggia (BO) - Italy
T. +39 051969109
www.nptsrl.com

NPT srl
Production and R&D
Via Stazione, 12
Villanova d'Ardenghi (PV) - Italy
T +39 0382400140

- guarantees complete adhesion and coverage without interruptions even on non-homogeneous or curved surfaces
- Combined with non-woven fabric, it allows to cover details, corners and edges
- Simple to repair in case of damage
- Paintable

TECHNICAL DATA

Appearance	Semi-liquid paste
Color	Grey
Chemical nature	Polyurethane
Curing Mechanism	Moisture-curing
Hardness Shore A (DIN 53505)	ca. 56
Density [g/cm³] (NPT method 06) (23°C and 50% RH)	ca. 1.39
Skin time [min] (NPT Method 17) (23°C and 50% RH)	ca. 180
Elastic modulus at 100% [N/mm²] (ISO 37 DIN 53504)	ca. 2.2
Tensile strength [N/mm²] (ISO 37 DIN 53504)	ca. 4.0
Elongation at break [%] (ISO 37 DIN 53504)	ca. 800
Water vapour permeability WVT [g/hm²] (DIN 52615)	< 0.6
Application temperature [°C]	From +5 to +40
Temperature Resistance [°C]	From -40 to +100

APPLICATION

While preparing the application, please always make sure that the substrate is sufficiently clean. If present, joints and voids need filling and sealing with U-Seal sealant. If present, critical surface parts like cracks, expansion joints, and parts that undergo severe stress need the use of a non-woven fabric.

Necessary tools:

- Cleaning equipment (broom, vacuum cleaner)
- Scraper with rubber handle

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- Painter ‘s masking tape, gloves, wipes, tool solvent
- Applicator for cartridge
- Spatula, wide or narrow, with teeth
- Quartz sand in a mix of 0,06 – 0,45 mm grain size

Weather and temperatures: use product stored from +15°C to +25°C with processing temperature between +5°C and +35°C. Please consider that at substrate and processing temperatures of about 35°C the product may flow away from vertical surfaces. While planning the job always check weather forecast so during application and curing no rain precipitation may occur for at least 4 hours. Nevertheless, if rain occurs after 4 hours from coat application, skin has safely formed and the product will not be washed away.

Surface appearance and preparation: surfaces must be clean, dry, free of water, oil, grease, mould releasing agents or rust and of sound quality. As a rule, the substrates must be prepared in accordance with NPT guidelines; guidance regarding adhesion on specific surfaces may be obtained by submitting substrate samples for analysis to our Laboratories. Remove all loose particles or residues with a jet of compressed air, sandpaper or hard brush. Do not apply on edgy or sharp points. Possible surface irregularities need to be smoothened. A good cleaning is essential for a good adhesion. Always pre-test substrates. On many clean substrates a good adhesion can be achieved without adhesion promoter. However, it should always be tested.

Mineral and porous substrates such as concrete, asbestos cement, brick: the substrate must be sound, not crumbling. Dust, dirt and loose particles must be thoroughly removed (broom, vacuum cleaner, shot blasting, grinding, etc.). If necessary, the surface should be wiped wet. Permanently wet surfaces must be dried before application. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days.

Joints, details and cracks preparation: the careful sealing of existing cracks and movement and connection joints before the application is extremely important for long lasting waterproofing results. Fill all cracks with a sealant from our U-Seal range. If necessary, protect the sealed cracks with non-woven fabric saturated with U-Coat 850, applied even wet on wet on the sealed joint. To avoid three-sided adhesion and to achieve a suitable dimensioning the joints must be backfilled using closed cell backer rod. Smoothen U-Seal within its skin time using a spatula. Do not use smoothing agent, this may affect the adhesion between U-Seal and U-Coat 850 negatively. In particularly crack-prone or other problem areas, like wall-floor connections, 90° angles, chimneys, pipes and waterspouts (siphon) the insertion of a non-woven fabric soaked and saturated in U-Coat 850 to be gently pressed in the first wet layer immediately after its application is recommended. After at least 4h and no later than 48h the second layer can be applied.

Application on the surface: U-Coat 850 is ready for use and can be applied by roller, brush or trowel directly from a pail. In this case make sure that no dirt is brought into the container. Mask off the area or details using painter’s masking tape. Finish the coat by removing the masking tape. After waiting at least 4 hours and no more than 48 hours the second layer can be applied in the same manner as the first coat. If using the non-woven fabric insert, use enough product to cover the fabric that should no longer be visible at the surface.

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TOPCOAT APPLICATION

U-Coat 850 best UV and abrasion resistance for exposed surfaces can be reached by topping off the wet layer sprinkling on approx. 2-3 kg/m² of quartz sand in a mix of 0,06 – 0,45 mm grain size, creating a hard covering shell. Quartz sand topping is strongly recommended in demanding application when long lasting service life is expected (more than 5 years) or when high UV resistance and sun reflectivity is required, like in tropical climates. U-Coat 850 may be over-painted, however due to the large number of paints and varnishes available on the market, a compatibility test must be carried on before application. The drying time of alkyd resin-based paint may increase.

CONSUMPTION GUIDE

These are the minimum recommended consumes, in order to reach the thickness for the material to be effective:

- 1st Layer: ca. 0,3 kg/m^2 slightly diluted with a compatible solvent to act as primer.
- 2nd Layer: ca. 0,6 kg/m^2
- 3rd Layer: ca. 0,6 kg/m^2 as finishing

Surface finishing with quartz sand topping may require an extra layer of 0,2 kg/m^2.

CLEANING OF EQUIPMENT AND PERSONAL PROTECTIVE MEASURES

Clean the tools used with acetone or solvent. When the adhesive has not yet hardened, it can be removed using paper or a cloth. Once hardened, the product can only be removed mechanically. Avoid skin contact by using latex, rubber or polyethylene gloves. If it comes in contact with the skin, remove immediately and wash with soap and water.

PACKAGING

Pail 17 kg
Drum 260 kg

STORAGE AND SHELF LIFE

U-Seal 850 can be stored for 12 months in its original packaging (unopened container) between 10°C and 25°C in a cool, dry place. The storage temperature should not exceed 25°C for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.

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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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