

DESCRIPTION

YHPUroof-8531 is a single-component, cold-applied, moisture-cured aliphatic polyurethane waterproofing membrane that forms a seamless, highly abrasion-resistant, and durable layer suitable for outdoor applications with heavy pedestrian traffic. It can be used independently or as a top coat over an aromatic polyurethane base coat, such as YHPUcoat-8200 or YHPUcoat-8400. Designed by self-leveling, it also has a highly thixotropic version available for vertical applications upon request.

WHERE TO USE

YHPUroof-8531 is recommended for footbridges, balconies, terraces, roof walkways, stadiums, and other outdoor waterproofing projects with heavy pedestrian and/or casual vehicular traffic.

CHARACTERISTICS AND PACKAGING

Item	Data
Appearance	Viscous Liquid
Viscosity/cp	7000±2000
Color	Grey
Density/kg/L	1.05-1.15 kg/L
Solid Content by Weight	85-87 %
Pot life/h	2
Packing Size	20 kg per metal pail

ADVANTAGES

- Cold-applied and moisture-cured; no mixing, heating, or flame is required.
- Excellent crack-bridging properties and flexibility, even at low temperatures.
- Resistant to water, deicing salts, diluted acids, and alkalis.
- Good adhesion to most substrates. Adhesion is enhanced when bonding with an epoxy primer.
- UV-resistant and non-yellowing.

PROPERTIES

Description	Test Methods	Typical Values
VOC / g/L	ASTM D2369	≈180
Tensile Strength / MPa	ASTM D412	≥15
Elongation at Break / %	ASTM D412	≥450
Tear Strength / N/mm	ASTM D624	≥50
Pull-off Adhesion to Concrete / MPa	ASTM D7234	≥2.5
Shore A Hardness	ASTM D2240	≈70
Taber abrasion (750 g, 500 r, CS-10) / mg	ASTM D4060	≈20
Water Penetration Test (5 bar, 3 days)	DIN 1048-5	No Penetration
Low Temperature Flexure (-35 °C)	ASTM D522	No Cracks
Set-to-Touch Time / h	ASTM D1640	≈3

Note: The above data were tested under standard conditions (temperature 23 °C ± 2 °C, relative humidity 50% ± 10%).

APPLICATION INSTRUCTIONS

Application information

Items	Description
Consumption*	1.25-1.40 kg / m ² for 1mm dry film
Coverage	9-11 m ² /set (20kg) at 1.5mm dry film thickness
Recommended thickness	1.2-1.5 mm by 2 coats 1.0-1.2 kg / m ² / coat at 0.7-0.8 mm dry film thickness
Ambient air temperature	5 °C min / +40 °C max
Relative air humidity	<85%
Substrate temperature	5 °C min. / +40 °C max. ≥ 3 °C above dew point, beware of condensation

*Material consumption depends on the porosity and texture of the substrate.

Application Instructions

- **Substrate preparation:** The substrate should be clean, dry, sound, and free of all contamination such as dirt, oil, and grease. Concrete surface defects such as blowholes and voids must be repaired. Concrete should be cleaned and prepared to achieve a laitance-free, open-textured surface by blast cleaning or other mechanical means if necessary. Filling of joints and surface leveling must be carried out before coating. It is recommended to use an epoxy primer to block the cementitious substrate for pinhole prevention and adhesion promotion.
- **Detailing:** Firstly, install the coating at detail spots such as construction joints, water outlets, and concave/convex corners. For wide cracks, use sealant to skin over and install fabric reinforcement between two wet coats to ensure thorough penetration and full embedment. The total thickness of the composite coating layer should be at least 1 mm.
- **Coating application:** Apply at the recommended coverage rate using a notched squeegee or trowel. Extend the coat over the entire area, including previously detailed joints and cracks. Recoat time is normally 12-24 hours, while low temperature or humidity may extend the waiting time. If slip-resistance is required, apply a 0.2-0.4 mm thick wet film to the installed and cured coat, and broadcast dried aggregate onto the still-wet coat. Back-roll the surface to encapsulate the aggregate in the YHPUroof-8531 resin. Add an appropriate amount of pure xylene to thin the coat if necessary, to facilitate rolling.
- **Post-treatments:** Seal the coating edges with a UV-resistant sealant if necessary.

TRANSPORTATION AND STORAGE

The product should be stored in ventilated places, with no exposure to sunlight, rain, or fire. Avoid collisions during transportation. The storage temperature should be between 5°C and 30°C. Condition the material to 20-30°C before use. The shelf life is at least 12 months under normal transportation and storage conditions.

PRECAUTIONS

- Opening to traffic prior to cure may result in permanent staining, loss of aggregate, and subsequently premature failure.

YHPUroof-8531

Highly Abrasion-Resistant Polyurethane Waterproof Coating for Heavy Pedestrian Traffic



Technical Data Sheet (TDS)

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- Rain may blanch the uncured membrane, which is reversible once the water evaporates.
- Be cautious of substrate out-gassing effects when priming or coating during rising temperatures.
- Always dilute YHPUroof-8531 with high discretion. Impurities in an unknown thinner may impede coating curing.
- Apply YHPUroof-8531 only when ventilation is effective. Do not apply near the air intake vent of a running air circulation system.
- When applying over existing coatings, compatibility and adhesion tests are necessary. Be aware of long-term durability, as the existing coating layer may deteriorate.
- Direct application on bituminous materials may result in coating discoloration and/or bituminous material softening. It is recommended to use a mortar or epoxy primer to block bituminous migration.
- Do not apply YHPUroof-8531 directly on plastic drinking water pipelines.

HEALTH AND SAFETY

Please read the safety manual carefully, our security experts will be pleased to give you advises about safety, health and environmental issues.

DISCLAIMER

The above information and recommendations which are based on our experience are as for reference, they can't replace the customers' own experimental results. Since our company, our representatives or distributors can't control the transportation, storage, handling and use conditions of the products, the economic disputes and the quality accident caused by improper use can't be attributed to our suggest. In any application, the customer shall be responsible to comply with obligations of third-party intellectual property rights. Without our consent, anyone shall not provide technical information to third parties.