

DESCRIPTION

YHPUroof-8401 is a single-component, cold-applied, moisture-cured aliphatic polyurethane waterproofing membrane that forms a seamless and durable layer for outdoor applications with heavy pedestrian traffic. It can be used independently or as a top layer over an aromatic polyurethane base coat, such as YHPUroof-8200, or YHPU-8400 for enhanced performance and longevity.

WHERE TO USE

YHPUroof-8401 is recommended for footbridges, balconies, terraces, roof walkways, stadiums, and other outdoor waterproofing projects exposed to heavy pedestrian traffic.

CHARACTERISTICS AND PACKAGING

Item	Data
Appearance	Viscous Liquid
Viscosity / cp	7000±2000
Color	Grey
Density / (kg/L)	1.05-1.15
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 acid, and alkaline.
- Good adhesion to most substrates.
- UV-resistant and non-yellowing.

PROPERTIES

Description	Test Methods	Typical Values
VOC / g/L	ASTM D2369	≈180
Tensile Strength / MPa	ASTM D412	≥11
Elongation at Break / %	ASTM D412	≥350
Tear Strength / N/mm	ASTM D624	≥40
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	≈35
Water Penetration Test (5 bar, 3 days)	DIN 1048-5	No Penetration

Technical Date Sheet (TDS)

2 / 3

Description	Test Methods	Typical Values
Low Temperature Flexibility (-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 coating pinhole prevention and adhesion promotion.
- Detailing:** Firstly, apply the coating at detailed areas such as construction joints, water outlets, and concave and convex corners. For wide cracks, use sealant to cover the surface 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 the coating at the recommended coverage rate using a notched squeegee or trowel. Extend the coat over the entire area, including previously detailed joints and cracks. The recoat time is normally 12 to 24 hours; however, low temperature or high humidity may extend the waiting time. If slip-resistance is required, apply a 0.2–0.4mm thick wet film to the installed and cured coat, and broadcast dry aggregate onto the still-wet film. Backroll the surface to encapsulate the aggregate in the YHPUroof-8401 resin. If necessary, add an appropriate amount of pure xylene to thin the coat and facilitate rolling.
- Post-treatments:** Seal the coating edges with UV-resistant sealant if necessary.

TRANSPORTATION AND STORAGE

Technical Date Sheet (TDS)

3 / 3

The product should be stored in well-ventilated areas, protected from sunlight, rain, and fire. Avoid collisions during transportation. The recommended storage temperature range is 5°C to 30°C. The shelf life is a minimum of 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.
- 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-8401 with caution. Impurities in an unknown thinner may impede coating curing.
- Apply YHPUroof-8401 only in areas with effective ventilation. Do not apply near the air intake vent of an operating air circulation system.
- When applying over existing coatings, compatibility and adhesion tests are necessary. Be aware that the long-term durability may be compromised if the existing coating layer deteriorates.
- Direct application on bituminous materials may result in coating discoloration and/or softening of the bituminous material. It is recommended to use a mortar or epoxy primer to block bituminous migration.
- Do not apply YHPUroof-8401 directly on plastic drinking water pipelines.

HEALTH AND SAFETY

Please read the safety manual carefully. Our safety experts will be pleased to provide you with advice on 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.