

PUR301 MATTE WATERBORNE POLYURETHANE TOPCOAT

- PUR301 is an eco-friendly, two-component waterborne polyurethane coating. It is precisely formulated from a hydroxyl-terminated polyurethane copolymer emulsion (Component A) and a hydrophilic aliphatic polyisocyanate curing agent (Component B). Using water as the dispersion medium, it forms a film with high cross-linking density through a chemical reaction. Specifically designed with a matte finish, it aims to provide a high-end decorative protective layer.

Application

- Floor coating: Serving as a protective surface layer for epoxy flooring, polyurethane flooring, cement self-leveling, and inorganic terrazzo flooring, it enhances wear resistance and decorative effects.
- Concrete protection: Concrete sealing protection for industrial buildings such as workshops, warehouses, and parking lots.
- Exterior walls and stone materials: Used as a topcoat for textured stone paint and multi-color paint surfaces, or as a stain-resistant protective layer for stone surfaces.

Product Features

- Environmental safety: Using water as a solvent, it has low VOC content, is non-toxic and odorless, non-flammable and non-explosive, and complies with national environmental protection regulations.

- Excellent appearance and tactile feel: The paint film exhibits high transparency, fully revealing the substrate texture; the matte finish is uniform and soft, with a fine and smooth tactile sensation, and strong scratch resistance.

- High wear resistance and high hardness: The paint film exhibits high cross-linking density and rapid hardness increase (ultimately reaching 2H-4H), demonstrating excellent wear resistance and scratch resistance.
  Excellent protective performance:
  -Chemical resistance: Water-resistant, oil-resistant, acid/alkali-resistant (e.g., 10% H_2SO_4, 10% NaOH), and resistant to common solvents.
  -Weather resistance: Aliphatic curing agents confer excellent resistance to UV yellowing, making it suitable for various indoor and outdoor applications.

- Strong adhesion: Exhibits excellent inter layer adhesion to epoxy flooring, concrete, wood, and metal substrates.

PERFLEX NOVEL MATERIALS
Distributed in Australia by Synergy Building Supplies.
236 Planet Street, Welshpool WA 6106, Australia
1300 655 853, sales@oxide.com.au

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Physical Parameters

Part A	Part B
Appearance:Milky white liquid	Appearance: Transparent liquid
Specific gravity 25°C:1.02g/ml	Specific gravity 25°C:1.16g/ml
Solids: 40%	Solids: 100%

Technical Data	
Working time (25°C)	60mins
Surface drying time (25°C)	≤2 hours
Tack free (25°C)	≤24hours
3 days hardness	2H
Wear resistance (750g/500r)	≤20 mg
Water resistance (24h)	No abnormalities in the coating film
Chemical resistance (24h)	Resistant to 10% sulfuric acid, 10% sodium hydroxide, etc., without any change

Application Guide

1. Substrate preparation

-Cleaning: The substrate must be dry, clean, free from oil stains, dust, and loose materials.

-Sanding: If applied over an existing paint film or high-gloss topcoat, sanding is recommended to enhance adhesion.

-Primer: It is recommended to use a dedicated water-based sealing primer or intermediate coat in conjunction to ensure the overall system stability.

2. Mixing ratio

Mix strictly according to the weight ratio A:B=5:1.

Slowly pour component B (curing agent) into component A while stirring at low speed with an electric mixer for approximately 2-3 minutes to ensure uniform mixing.

-Aging: After thorough mixing, let stand for 5-10 minutes to allow aging until the bubbles disappear before use.

3. Dilution

-Depending on the construction method, 0-10% clean tap water may be added to adjust viscosity.

-The use of oily diluents or contaminated water is strictly prohibited.

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4. Construction Method

-Spraying: Air-borne spraying or airless spraying can achieve the smoothest and most refined matte finish.

-Rolling/coating: High-quality short-haired rollers are recommended. During rolling, adhere to the principle of "longitudinal rolling with lateral light collection," ensuring smooth movements to avoid stoppages that may cause joint marks.

5. Construction Environment

-Temperature: Construction is recommended to be performed between 10°C and 35°C.

-Humidity: The relative humidity should be maintained at <80%. Construction is strictly prohibited when humidity exceeds 85% or temperatures fall below 5°C, as this may lead to issues such as slow drying, gloss loss, and whitening.

-Ventilation: Adequate ventilation should be maintained during construction and drying processes.

6. Consumption amount

-Theoretical coating amount: approximately 0.1–0.15 kg/m² per coat (depending on substrate flatness and application thickness).

7. Drying and Reapplication

Reapplication interval: Under conditions of 25°C and 60% humidity, reapplication can be performed approximately 4-8 hours later.

Complete curing: 7 days (the longer the curing time, the lower the temperature and higher the humidity). Avoid contact with water and chemicals prior to complete curing.

8. Tool cleaning

After construction completion, all tools shall be immediately cleaned with clean water.

Packaging&Storage Condition

Part A:5KG or 20KG Part B: 1KG or 4KG

Storage time in original unopened packaging:

Part A: 12 months Part B: 12 months

Storage conditions: Store in a sealed container in a cool, dry, and well-ventilated place, away from direct sunlight. Storage temperature should be maintained between 5°C and 35°C, and strict protection against freezing is required.

Statement

The information provided in this manual is based on our current knowledge and experience, covering the fundamental applications of the product. As construction conditions, supporting systems, and environmental factors are beyond our control, we recommend users conduct thorough testing prior to use to verify whether the product is suitable for specific processes and applications. Our company shall not be liable for any losses resulting from failure to adhere to the instructions in this manual.

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