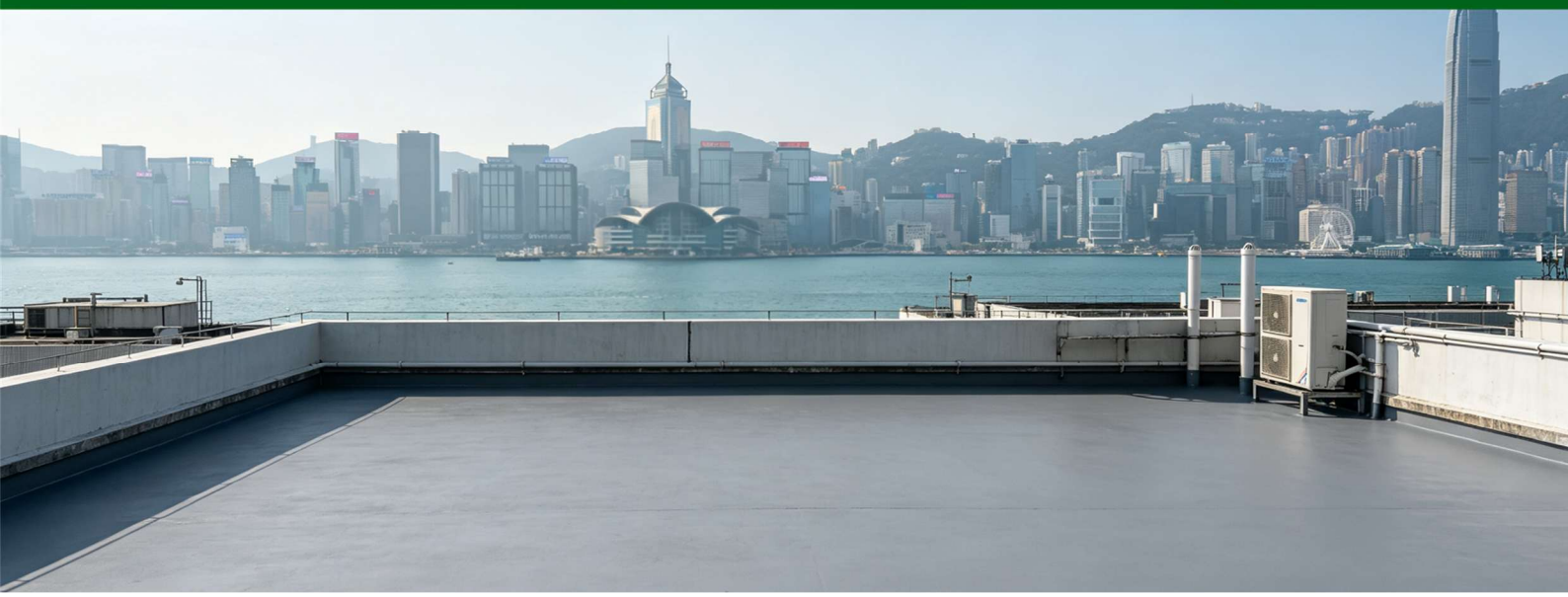
PU388

水性聚氨酯PU高彈性防水塗料
Water-based Polyurethane Waterproof Coating



Product Description

Straight Master PU388 is a cold-applied, one-component, waterborne liquid-applied waterproofing membrane with high elasticity and UV resistance, capable of withstanding foot traffic for inspection and maintenance.
It is formulated with a water-based polyurethane dispersion, combined with selected additives, pigments, and fillers. This product offers excellent weather resistance, outstanding mechanical properties, and low environmental impact, making it suitable for use as both a waterproofing layer and a decorative finish for exterior walls. It is decorative and provides an architectural finish, and can be applied onto a broad range of substrates including sound cementitious screeds, renders and concrete.

Where to Use

Straight Master PU388 is specially designed for new construction and renovation projects that require exposed waterproofing and is suitable for waterproofing and decorative protection of various building elements. This product can be applied directly onto concrete roofs, tiled roofs, exterior walls, metal roofs, decks and canopies, providing an excellent waterproof barrier and a durable architectural finish. Whether it is for balcony and exterior wall renovation of residential buildings, roof waterproofing repair of commercial high-rises, or metal roof protection of industrial facilities, it is up to the task.
Furthermore, this product is also highly suitable for exterior wall façade refurbishment of existing buildings, allowing direct application over the original surface without demolition, achieving both waterproofing and a renewed appearance in one go. Notably, it is also an ideal solution for waterproofing equipment plinths in plant rooms and machine rooms, where its tough and durable coating can withstand foot traffic for routine equipment inspection and maintenance without sustaining damage, making it a perfect choice for data centers, telecommunication rooms, and electrical substations.

Advantages

Straight Master PU388 is a water-based, one-component formulation that is ready to use straight from the pail—requiring no organic solvents, with extremely low odor and VOC content approaching zero, making it safe and environmentally friendly for both applicators and the surrounding environment. Once cured, the coating forms a highly elastic, continuous waterproof membrane that effectively bridges hairline cracks in the substrate and accommodates dimensional changes caused by thermal expansion and contraction. It offers outstanding weather resistance and UV stability, with no yellowing or chalking even after prolonged sun exposure, preserving its original color and finish. The product exhibits excellent adhesion to a wide range of substrates including concrete, mortar, and metal, and its tough surface can withstand foot traffic, facilitating convenient inspection and maintenance access. Combining both waterproofing and decorative functions without the need for an additional topcoat, it provides a cost-effective and durable total solution for applications such as roofs, exterior walls, and equipment plinths in plant rooms.

Characteristics & Packaging

Item	**Specification**
Appearance	Viscous Liquid
Color Options	White / Grey
Density	1.4 – 1.6 kg/L
Solid Content (by weight)	63 – 68 %
Packaging	Plastic drum
Pack Size	20 kg per drum
Shelf Life	24 months under normal storage conditions
Storage Conditions	Store in 5°C – 35°C, protect from direct sunlight and frost

Physical & Mechanical Properties

Property	**Test Method**	**Typical Value**
Tensile Strength (MPa)	ASTM D412	≥ 3.12
Elongation at Break (%)	ASTM D412	≥ 849
Tear Strength (N/mm)	ASTM D624	≥ 20
Pull-off Adhesion to Concrete (MPa)	ASTM D7234	≥ 2.0
Shore A Hardness	ASTM D2240	≈ 69.7
Water Permeability (5 bar, 3 days) (mm)	BS EN 12390-8	≈ 0
Water Vapor Transmission ($g/m^2 \cdot 24h$)	ASTM E96	≈ 42
Low Temperature Flexibility (–35°C)	ASTM D522	No Cracks
Thermal Conductivity [W/(m·K)]	ASTM D5930	≈ 0.38
VOC Content (g/L)	ISO 11890-2	≈ 0
UV Exposure (Xenon Arc, 3000 hrs)	BS EN ISO 16474-2	No visual change

Application Information

Parameter	Value / Instruction
Consumption*	2.2 – 2.6 kg/m^2 per 1 mm dry film thickness
Coverage (per 20 kg set)	5 – 6 m^2 at 1.5 mm dry film thickness
Recommended Total Thickness	1.4 – 1.6 mm (applied in 2–3 coats)
Per Coat Thickness	0.3 – 0.8 mm dry film (0.8 – 1.8 kg/m^2 per coat)
Roofing Application Rate	Approx. 1.0 kg/m^2 per coat
Wall Application Rate	Approx. 0.75 kg/m^2 per coat
Ambient Temperature	5 °C min – 40 °C max
Relative Humidity	< 85%
Substrate Temperature	5 °C min – 40 °C max (≥ 3 °C above dew point, beware of condensation)

Application Instructions

Construction temperature should be between 5°C and 35°C.

Outdoor construction is prohibited on rainy or snowy days.

Substrate Preparation

The substrate must be flat, solid, clean, free of standing water, dust, oil, and grease.

New concrete should be cured for at least 28 days before application, and the substrate must be completely dry.

In case of rain, let the concrete substrate dry for 3 days before application.

Open textured surfaces such as mortar or concrete should be primed with an appropriate primer to ensure good bond.

Round corners at internal and external angles and around penetrations.

Detailing with Reinforcement

For areas where excessive movement may be expected, such as corners, pipe roots, drainage outlets, joints, and interfaces subject to differential movement, reinforce with glass fabric.

Cut the fabric to the required size and shape in advance, and apply it onto the first coat while it is still wet. Use a brush to gently pat the fabric to ensure the coating fully penetrates through the reinforcement, avoiding wrinkles or lifted edges.

For simple joints, the fabric overlap should be at least 50 mm on each side. For complex areas and

corners, use fabric 250 mm wide with a 125 mm overlap on each side.

Allow the detailing coat to dry for at least 4 hours, or until it can withstand foot traffic without sustaining damage.

First Coating Application

Apply the first coat over the entire area by brush, roller, or squeegee, paying extra attention to rough surfaces.

Roofing application rate: approx. 1.0 kg/m^2 per coat; wall application rate: approx. 0.75 kg/m^2 per coat.

Allow the first coat to dry for 8 hours before applying the second coat.

Second and Final Coat Application

Apply the second coat in a direction perpendicular to the first coat, using spray, brush, squeegee, or roller at the same application rate.

If a third coat is required, apply it in the same manner once the second coat has dried for 8 hours.

Curing

Curing time depends on ambient conditions. The surface should be left undisturbed at least until the next day, and preferably 2 to 3 days.

This is especially important when temperatures are below 20°C.

For work carried out indoors or in poorly ventilated areas, using fans will help to shorten the curing time.

Subsequent Work

After the waterproofing layer is fully cured, perform a water tightness test. Upon passing inspection, subsequent work (such as protective isolation layer or tile installation) may proceed in accordance with the design requirements.

Cleaning of Tools

Clean all tools and application equipment with clean water immediately after use.

Transportation & Storage

- Protect from freezing, sunlight, rain, compression, and impact during transport. Ensure packaging remains intact and undamaged.
- Store in a cool, ventilated, dry place, away from direct sunlight and fire sources.
- Storage temperature should be maintained between 5°C and 35°C.
- Under normal storage and transportation conditions, shelf life is 12 months.

Precautions

- Construction temperature should be between 5°C and 35°C. Do not apply on rainy or snowy days.
- If the coating is exposed to rain before it is fully dried, cover and protect it immediately.
- Stir the product thoroughly before use. Slight separation may occur after storage; this is normal and can be restored by remixing with a slow-speed mixer or light hand mixing with a spatula.
- Do not add water unless instructed by technical personnel.
- Follow all application guidelines provided by the manufacturer before construction.
- For more information, please read the Safety Data Sheet before starting work.

Ecology, Health & Safety

Please read the Safety Data Sheet (SDS) carefully before use. Our safety specialists are pleased to provide advice on safety, health, and environmental issues.
For information and advice on the safe handling, storage, and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (MSDS), which contains physical, ecological, toxicological, and other safety-related data.

Contact Information

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