

MONOGUARD PU*Polyurethane liquid membrane for waterproofing and protection***DESCRIPTION**

MONOGUARD PU Single component high-quality one part polyurethane coating that cures by reacting with the humidity in the atmosphere to form a strong elastic film with excellent adhesion to different substrates. Can be applied by roller brush, or airless spray machine. The product is based on pure elastomeric hydrophobic polyurethane resin with special inorganic filler that provides the material with excellent weathering resistance properties.

APPLICATIONS**Waterproofing and protection of:**

- Bathrooms.
- Roofs, Balcons, planter boxes.
- Gypsum and cement boards.
- Polyurethane insulation foams.
- Light roofing made of metal or fibrous cement.
- Basement and foundations structure

ADVANTAGES

- Excellent thermal resistance. Max service temperature 80°C.
- Excellent adhesion to all common primed substrates.
- Excellent mechanical properties, high tensile and tear strength, high abrasion resistance.
- Excellent water and UV resistance. The white colour reflects much of the solar energy reducing the internal temperature of the building.
- Good breathability characteristics which minimize the accumulation of humidity under the coat.
- Resistant to root penetration, making it ideal for use in planters and green roofs.
- Cold Resistance: the film remains elastic down to minus 40°C.

STANDARDS

Monoguard PU complies with ASTM C836 (see technical properties table).

TECHNICAL PROPERTIES @ 25°C, 55% RH:

Colour:	Variable
Specific gravity:	1.35 ± 0.05
Skin over time:	4 - 6 hr
Tack-free time:	6 - 8 hr
Re-coatable time:	8 - 24 hr
Light pedestrian traffic time:	24 - 48 hr
Final curing time:	7 days
Service temperature:	-40 to 80oC
Nonvolatile (solid) content:	
ASTM D2369	≥ 85% (pass)
Shore hardness @ 28 days: ASTM D2240	
Shore A	
Shore 00	40 ± 5 (White & grey colour) 45 ± 5 (Black colour) 80 ± 5 (White & greycolor) (pass) 90 ± 5 (Black colour) (pass)
Adhesion in peel after water immersion:*	
ASTM C794	≥ 35 N (pass)
Film thickness:	
ASTM C836	Pass
Bond Strength:*	
ASTM D4541	
BS EN ISO 4624	≥ 0.8 MPa @ 7 days
Tensile strength:	
ASTM D412	≥ 2 MPa @ 7 days
Tensile strength:	
ASTM D2370	≥ 4 MPa

TECHNICAL PROPERTIES @ 25°C, 55% RH:

Tear strength:

ASTM D624 ≥ 10 kN/m

QUV accelerated

weathering: ISO 4582 Pass @ 2000 hr

Hydrolysis (8% KOH, 15

days @ 50°C): Pass

Water vapour

transmission: ASTM E96 16 ± 2 g/m².day

Water permeability(5 bars):

DIN 1048 EN 12390-8 0 mm penetration

CHEMICAL RESISTANCE

UV resistance Excellent

Hydrolysis resistance Excellent

Resistance to Industrial Environment Good

LIMITATIONS

- Only white and light grey colours can be used for exposed areas.
- Do not use on an unsound substrate.
- Not recommended for waterproofing of swimming pool surfaces in contact with chemically treated water.
- Since MONOGUARD PU cures with moisture, low humidity conditions will extend the tack-free time and recoat time.

METHOD OF USE

SURFACE PREPARATION

The surface should be clean, dry, sound and free from oil, grease and wax contamination. Cement laitance, loose particles, mould release agent or curing membranes must be removed.

Fill surfaces irregularities with a suitable product. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days.

PRIMING

It is recommended to prime all kinds of substrates using solvent-based polyurethane primer be used over porous and nonporous surfaces before the application of MONOGUARD PU

MONOGUARD PU PRIMER should be applied using a brush or roller at a rate of 0.1 - 0.2 litre/m² (depending on the substrate porosity) to achieve 40 - 80 microns DFT. Leave the primer to cure for 24 - 48 hours before the application of MONOGUARD PU at normal conditions. Note: At low ambient temperatures (10 to 15°C), it is important to leave Monoguard Primer PU to cure for at least 48 hours before the application of MONOGUARD PU. Alternatively, Aquathane Primer W is designed to significantly improve the adhesion between MONOGUARD PU and all kinds of non-porous substrates

APPLICATION

For spraying with airless spray machine, MONOGUARD PU can be diluted by 5 - 10% using STARKE Solvent PU (consult STARKE's technical department for further details).

For any mixing done on-site, low speed (300 rpm) mixer or electric drill should be used. Apply the material with roller or brush. Apply at least two coats. Do not leave more than 24 hours between coats.

Note: It is recommended to test the application of the primer and MONOGUARD PU on a small area on site before proceeding with the works to ensure that a smooth and homogeneous film is achieved without any surface defect.

CONSUMPTION

» First coat: 0.7 - 0.8 kg/m².

» Second coat: 0.7 - 0.8 kg/m².

» Total consumption: 1.4 - 1.6 kg/m² to give 1 mm dry film thickness.

CLEANING

Clean all tools after finishing with paper towels and then wipe by using STARKE solvent PU. Do not try to clean rollers.

PACKAGING

MONOGUARD PU is available in 20 kg and 25 kg packs.

STORAGE

MONOGUARD PU has a shelf life of 12 months from date of manufacture if stored in the original unopened pails at temperatures between 5 C. and 25°C.

If these conditions are exceeded, contact STARKE Technical Department for advice.

CAUTIONS

HEALTH AND SAFETY

Apply in well ventilated areas. Do not smoke. Do not apply near naked flames. In closed areas use force ventilation and carbon active masks. Keep in mind that solvents are heavier than air so vapour concentration is higher in air closer to floor.

For further information, refer to the Material Safety Data Sheet.

FIRE

MONOGUARD PU contains volatile flammable solvents.

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- **Surface treatments**
- **Grouts and anchors.**
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- **Waterproofing.**
- **Adhesives.**



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