// METHOD STATEMENT · LIQUID MEMBRANES

Polyurethane Liquid Waterproofing

Petroseal polyurethane coating on roofs, terraces and balconies

DOCUMENT	REVISION	ISSUE DATE	SYSTEM
PS-MS-04	Rev 01	04 Nov 2026	Petroseal PU coating

1. Purpose & scope

This method statement covers application of the Petroseal polyurethane liquid waterproofing system on concrete roofs, terraces, balconies and podiums. It includes primer, reinforcement at details, multi-coat application to 1.5–2.0 kg/m², and testing.

2. Reference documents

- Petroseal Polyurethane Waterproofing Coating TDS (PS-TDS-PU-01)
- Petroseal polyurethane primer and UV top coat product data
- Project drawings and details

3. Responsibilities

ROLE	RESPONSIBILITY
Site supervisor	Checks weather and substrate moisture before each coat. Controls the coverage record.
QA/QC inspector	Wet film checks, adhesion test, flood test sign-off.
Applicator crew	Prepares, mixes and applies to this method statement.

4. Materials

- Petroseal polyurethane coating (one-component, ready to use)
- Polyurethane primer for porous substrates; adhesion primer for non-porous substrates
- Polyester reinforcement fleece for details
- UV-stable polyurethane top coat for exposed areas where specified
- Epoxy or polymer repair mortar, PU joint sealant

5. Tools & equipment

- Grinder with diamond cup / shot blaster, industrial vacuum
- Low-speed mixer and paddle
- Rollers, brushes, notched squeegee or airless sprayer
- Wet film thickness gauge, weighing scale
- Moisture meter, thermometer / hygrometer (dew point)
- Pull-off adhesion tester

6. Health, safety & environment

- Read the SDS. Polyurethanes may contain isocyanates and solvents.
- PPE: chemical-resistant gloves, safety glasses, overalls. Organic-vapour respirator in enclosed or poorly ventilated areas.
- No smoking or flame in the work area. Keep containers closed.
- Edge protection or fall arrest on roofs.
- Collect waste and empty containers. Do not wash residues into drains.

7. Conditions before starting

- Concrete cured at least 28 days. Surface moisture content not above 5%.
- Substrate temperature at least 3 °C above dew point. Air and substrate temperature between +5 °C and +35 °C, relative humidity below 65%.
- No rain forecast for at least 4 hours after application.
- Falls correct, with no ponding.

8. Substrate preparation

1. Grind or shot-blast to remove laitance, old coatings and contamination, and open the surface.
2. Vacuum all dust.
3. Fill cracks, holes and blow holes with repair mortar. Rout and seal moving cracks and joints with PU sealant.
4. Form fillets at floor-to-wall junctions. Round external corners.

9. Priming

1. Apply primer by roller over the whole area, upstands included, at the coverage on the primer product data.
2. Allow the primer to dry before the first coat. Re-prime if the primer manufacturer's recoat window is exceeded.

10. Detailing

1. Apply a first coat of PU about 150 mm wide at corners, fillets, drains, penetrations and treated cracks.
2. Embed polyester fleece into the wet coat with a brush, without wrinkles. Saturate it with a second application.

11. Main application

1. Mix thoroughly (and with hardener in the correct ratio if 2K) using a low-speed mixer. Avoid air entrapment.
2. Apply the first coat at about half the total consumption (about 0.75 – 1.0 kg/m²) by roller, squeegee or airless spray.
3. After at least 6 hours (and within 48 hours), apply the second coat at right angles to the first.
4. Total consumption 1.5–2.0 kg/m² as specified. Check wet film thickness every 10 m² and record kg used per area.
5. Carry the coating up all upstands to at least 150 mm above finished level.
6. Apply UV top coat where the system is exposed, if specified.

12. Curing and testing

1. Protect from rain for 4 hours and from foot traffic for 24 hours. Full cure takes 7 days.
2. Carry out pull-off adhesion tests on a trial area or sacrificial spots as specified (ASTM D4541).
3. Flood test after full cure: about 50 mm depth for at least 48 hours, unless specified otherwise.

13. Inspection & test plan (hold points)

#	STAGE	CHECK	ACCEPTANCE	RECORD
01	Conditions	Moisture, dew point, forecast	Within PS-TDS-PU-01 limits	Weather / moisture log
02	Substrate	Prep profile, repairs, fillets	Open, clean, sound	Checklist + photos
03	Primer	Coverage, dryness	Full coverage, within recoat window	Log
04	Details	Fleece embedded at all details	No wrinkles, fully saturated	Photos
05	Coats	WFT, consumption per area	Total 1.5–2.0 kg/m²	WFT + consumption record
06	Adhesion	Pull-off	No loss of bond; value as per project specification	Test report

#	STAGE	CHECK	ACCEPTANCE	RECORD
07	Flood test	Leakage	No leaks	Signed report

14. Common defects to avoid

- Applying on damp concrete (blistering, loss of adhesion)
- Missing the recoat window (delamination between coats)
- Thin film at edges and details
- No fleece at cracks and junctions
- Rain on uncured coating

15. Handover records

- Weather and moisture log
- Consumption records per area and batch numbers
- Adhesion and flood test reports
- Photo record of details

PREPARED BY	CHECKED BY (QA/QC)	APPROVED BY (CONSULTANT)
Name / signature / date	Name / signature / date	Name / signature / date

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