POLYZEN
WHERE SOVEREIGN SURFACES RULE

TECHNICAL DATA SHEET
INTERIM

ZENPU Coat ZP-100

RANGE
ZENPU (PU)

MATERIAL FAMILY / GROUP
Polyurethane coating / UV-stable

CHEMISTRY
2-part aliphatic UV-stable PU coating

1. PRODUCT DESCRIPTION

ZENPU Coat ZP-100 is a two-part aliphatic polyurethane floor coating offering excellent UV and colour stability, flexibility and abrasion resistance. It keeps its colour and gloss where epoxies would amber, making it suited to daylight-exposed and external areas.

The flexible film accommodates minor substrate movement and resists weathering, delivering a durable, cleanable, colour-stable finish. Installed by POLYZEN as a complete supply-and-apply system.

2. SYSTEM (LAYER BUILD)

The ZENPU Coat system is applied by POLYZEN as one integrated installation:

LAYER	FUNCTION	DESCRIPTION
1 — Primer Coat	Adhesion	Compatible primer sealing and anchoring the system to the prepared substrate.
2 — PU Coat	UV-stable wear film	Aliphatic PU applied in one or two coats by roller/squeegee to the specified build.

3. TYPICAL APPLICATIONS & SECTORS

- Daylight-exposed & external floors
- Podiums, walkways & balconies
- Colour-critical & branded areas
- Commercial & institutional
- Light-industrial floors
- Recoat / refurbishment over sound floors

4. KIT COMPOSITION

COMPONENT	DESCRIPTION
Part A — Resin	Aliphatic polyurethane resin base
Part B — Hardener	Aliphatic isocyanate curing agent

Supplied as a pre-measured two-part kit. Mix full kits only, exactly as supplied — no part-mixing, no site additions. Kit pack size: **to be confirmed**. The formulation is proprietary to POLYZEN and is not disclosed.

5. TYPICAL / INDICATIVE PROPERTIES

Typical / indicative values — not a guaranteed specification; confirmed against POLYZEN batch testing & project commissioning.

PROPERTY	TEST METHOD	TYPICAL / INDICATIVE VALUE
Finish	—	Gloss/satin; UV-stable, wide colour range
Solids content	—	High-solids / solvent-free class (indicative)
Applied thickness	—	~150–300 microns per coat (indicative)
Coverage / consumption	—	~0.15–0.35 kg/m² per coat (indicative)
Pot life (mixed kit)	—	~20–40 min at 25 °C (indicative)
Overcoat interval	—	~12–24 h at 25 °C (indicative)
Light foot traffic	—	~24 h at 25 °C (indicative)
Full cure	—	~7 days at 25 °C (indicative)
Application temperature	—	10–35 °C; substrate ≥3 °C above dew point (indicative)
Substrate moisture	ASTM F2170	Within system limits per project assessment (indicative)
UV / colour stability	—	Aliphatic — high UV & gloss retention (indicative)
Flexibility	—	Flexible film, accommodates minor movement (indicative)
Hardness	ASTM D2240	~70–80 Shore D (indicative)
Pull-off adhesion to concrete	ASTM D4541	>1.5 N/mm², typically concrete failure (indicative)
Abrasion resistance (Taber)	ASTM D4060	~40–80 mg loss, CS-17, 1 kg, 1000 cycles (indicative)
Chemical resistance	ASTM C267	Resists dilute acids, alkalis, oils & common spillage; schedule per project (indicative)
VOC content	—	Low-VOC / solvent-free class (indicative)

6. SURFACE PREPARATION

- **Concrete age & strength:** new concrete cured a minimum of 28 days; sound, structurally stable substrate of adequate strength for the intended service.
- **Mechanical preparation:** diamond grinding or captive shot-blasting to remove laitance, curing compounds and contamination, producing a clean, open-textured profile. Acid etching is not accepted.
- **Moisture:** substrate assessed per ASTM F2170 (in-situ RH) before application; moisture-mitigation primer specified where readings exceed system limits.
- **Repairs:** cracks, joints and defects repaired with compatible epoxy repair mortars before priming.
- **Priming:** full-coverage primer applied to the prepared substrate; the body coat is applied within the primer's overcoat window.

7. APPLICATION (OVERVIEW)

- **Mixing:** pre-condition kits to 15–25 °C. Power-mix components in sequence to a homogeneous, lump-free consistency using a low-speed mixer. Mix full kits only, exactly as supplied.
- **Placement:** apply by the specified method (roller / squeegee-and-backroll / notched trowel + spike-roll) at the stated rate; maintain a wet edge.
- **Intervals:** respect pot life, overcoat windows and cure times; plan pours in continuous bays to avoid day joints in visual areas.
- **Environment:** control ventilation, dust and direct sunlight during application and initial cure; protect from water and contamination until full cure.

A full project-specific Method Statement (bay layout, joint detailing, coving, quality checkpoints) is issued by POLYZEN for every installation.

8. STANDARDS & COMPLIANCE

The ZENPU Coat system supports compliance with the following (subject to system design, project detailing & site testing):

- **Performance test methods:** ASTM C579 (compressive), ASTM D4541 (pull-off adhesion), ASTM D4060 (Taber abrasion), ASTM C267 (chemical resistance), ASTM D2240 (Shore hardness), ASTM F2170 (substrate relative humidity).
- **Slip resistance (where a textured finish is specified):** evaluated per ANSI A326.3 (DCOF) and ASTM E303 (pendulum), subject to system design, footwear & site testing.
- **Weathering:** aliphatic chemistry for UV, colour & gloss retention (indicative).

9. PACKAGING, STORAGE & SAFETY

- **Packaging:** pre-measured two-part kits. Pack size: **to be confirmed**.
- **Storage:** keep in original sealed containers, off the ground, in a dry covered area at 5–30 °C, away from direct sunlight, heat and moisture. Shelf life per batch labelling.
- **Safety:** uncured resins and hardeners can cause skin/eye irritation and sensitisation. Wear PPE (chemical-resistant gloves, goggles, protective clothing); ensure ventilation. Do not allow uncured material to enter drains.
- **SDS:** refer to the product Safety Data Sheet before use.

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