POLYZEN
WHERE SOVEREIGN SURFACES RULE

TECHNICAL DATA SHEET
INTERIM

ZENPU Hybrid ZP-400

RANGE
ZENPU (PU)

MATERIAL FAMILY / GROUP
EPU / sports & comfort

CHEMISTRY
3-part epoxy-polyurethane (EPU) sports / comfort floor

1. PRODUCT DESCRIPTION

ZENPU Hybrid ZP-400 is a three-part epoxy-polyurethane (EPU) comfort and sports floor that blends the toughness of epoxy with the elasticity of polyurethane. It offers a resilient, seamless surface with impact absorption, foot comfort and slip resistance.

Hybrid suits sports, play and multipurpose areas as well as workplaces where standing comfort and durability matter. Installed by POLYZEN to the specified build and texture.

2. SYSTEM (LAYER BUILD)

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

LAYER	FUNCTION	DESCRIPTION
1 — Primer Coat	Adhesion	Compatible primer sealing and anchoring the system.
2 — EPU Comfort Body	Resilient wear layer	Three-part EPU body providing elasticity, impact absorption and durability.
3 — Seal / Anti-slip	Finish & grip	PU seal and texture setting the slip and cleanability level.

3. TYPICAL APPLICATIONS & SECTORS

- Gyms & fitness studios
- Sports & multipurpose halls
- Play & activity areas
- Standing-comfort workstations
- Education & recreation
- Commercial wellness areas

4. KIT COMPOSITION

COMPONENT	DESCRIPTION
Part A — Resin	Epoxy-polyurethane (EPU) resin base
Part B — Hardener	Amine / isocyanate curing agent
Part C — Filler	Graded filler / texture aggregate

Supplied as a pre-measured three-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	—	Resilient, seamless, matte–satin; anti-slip options
Solids content	—	High-solids / solvent-free class (indicative)
Applied thickness	—	2–4 mm system (indicative)
Coverage / consumption	—	system-based per thickness (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)
Elasticity / comfort	—	Resilient EPU body — impact absorption & standing comfort (indicative)
Impact resistance	—	Improved impact tolerance vs rigid epoxy (indicative)
Hardness	ASTM D2240	~55–75 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 Hybrid 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.

9. PACKAGING, STORAGE & SAFETY

- **Packaging:** pre-measured three-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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