POLYZEN
WHERE SOVEREIGN SURFACES RULE

TECHNICAL DATA SHEET
INTERIM

ZENPU Cretescreed ZP-300

RANGE
ZENPU (PU)

MATERIAL FAMILY / GROUP
PU cement / heavy-duty screed

CHEMISTRY
3-part PU-modified cementitious screed (2–6 mm)

1. PRODUCT DESCRIPTION

ZENPU Cretescreed ZP-300 is a three-part polyurethane-modified cementitious screed, trowel-applied at 2–6 mm, engineered for the harshest wet-process and thermal environments. It withstands thermal shock, steam-cleaning, impact and aggressive chemical exposure where conventional resins fail.

Its dense, seamless, coved finish is designed for hygiene-critical food, beverage and pharmaceutical processing. Cretescreed can be laid on relatively young or damp concrete and installed with integral coving by POLYZEN.

2. SYSTEM (LAYER BUILD)

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

LAYER	FUNCTION	DESCRIPTION
1 — Primer / Scratch Coat	Adhesion	Primer or scratch coat to the prepared substrate as required by moisture and profile.
2 — PU Cement Screed	Heavy-duty wear body	Three-part PU-modified cementitious screed, trowel-applied 2–6 mm, with integral coving to walls/plinths.
3 — Seal / Anti-slip (optional)	Finish & texture	Optional PU seal and broadcast texture setting the cleanability and slip level.

3. TYPICAL APPLICATIONS & SECTORS

- Food & Beverage
- Dairy & Cold Storage
- Pharmaceutical & Life Sciences
- Breweries & Distilleries
- Commercial & Industrial Kitchens
- Chemical Processing

4. KIT COMPOSITION

COMPONENT	DESCRIPTION
Part A — Resin	Polyurethane resin base
Part B — Hardener	Isocyanate curing agent
Part C — Aggregate	Cementitious graded aggregate blend

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	—	Matte, seamless, dense; coved (indicative)
Applied thickness	—	2–6 mm, trowel-applied (indicative)
Coverage / consumption	—	system-based per thickness (indicative)
Working time	—	~15–25 min at 25 °C (indicative; shorter when warmer)
Light foot traffic	—	~12–24 h at 25 °C (indicative)
Full cure	—	~5–7 days at 25 °C (indicative)
Substrate moisture	ASTM F2170	Tolerant of relatively young / damp concrete vs conventional resins; assessed per project (indicative)
Compressive strength	ASTM C579	~40–60 N/mm² at full cure (indicative)
Pull-off adhesion to concrete	ASTM D4541	>1.5 N/mm², typically concrete failure (indicative)
Abrasion resistance (Taber)	ASTM D4060	~30–60 mg loss, CS-17, 1 kg, 1000 cycles (indicative)
Thermal resistance	—	Withstands thermal shock, steam-cleaning & wet-process cycling; indicative service approx. −30 to +120 °C depending on thickness (indicative)
Chemical resistance	ASTM C267	Strong resistance to organic & food acids, alkalis, oils, fats & sugars; project schedule to be reviewed (indicative)
Slip resistance	ANSI A326.3 / ASTM E303	Textured anti-slip options; DCOF / pendulum evaluated per finish (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 Cretescreed 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).
- **Hygiene-critical environments:** supports compliance with facility requirements under FSSAI and HACCP frameworks (Food & Beverage), and WHO-GMP, EU-GMP Annex 1, US FDA cGMP 21 CFR 211 and Revised Schedule M (Pharmaceutical & Life Sciences), through its seamless, non-dusting, cleanable finish — subject to overall facility design and validation.
- **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.
- **Thermal / steam:** thermal-shock & steam-clean resistant service (indicative; specific thermal code project-dependent).

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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