POLYURETHANE FINISHES

TopShield PU420-S

SOLVENT-BASED POLYURETHANE FLOOR FINISH

Rayson TopShield PU420-S is a two-component, solvent-based polyurethane floor finish that holds its colour and high gloss under strong UV while resisting abrasion and a broad range of chemicals.

TopShield PU420-S pairs a pigmented polyester polyol base with an aliphatic polyisocyanate hardener — the chemistry that keeps polyurethane finishes bright outdoors. Where epoxies chalk and yellow, PU420-S retains colour and high gloss under strong ultraviolet exposure.

KEY PROPERTIES

- Retains colour and high gloss under strong UV
- Excellent abrasion resistance (90 mg, CS-17 Taber)
- Documented resistance to a wide schedule of acids, alkalis and fuels
- Hygienic, easy-to-clean, dustproofing finish
- UV stability
- Abrasion resistance
- Chemical resistance
- Hygiene / washdown



Illustration — two-part set, Part A + Part B. Pack sizes: see this data sheet.

MIX RATIO	COVERAGE	POT LIFE	FULL RESISTANCE	PACK SIZE
3:1	0.10 L/m²	8 hours	7 days	5.5 kg set
A:B by weight	per coat	at 25 °C	chemical resistance	4.5 + 1 kg

01 RECOMMENDED USES

- Exterior industrial floors
- Floors requiring long-term colour and gloss retention
- Chemically exposed floors needing an easy-to-clean coloured finish

02 SUITABLE SUBSTRATES

- Primed concrete (minimum 28 days cure, moisture content below 4%, laitance-free)
- The primer coat must be fully cured and must seal the concrete efficiently before finishing

03 SYSTEM ROLE



Figure 1 — Typical system build-up (top to bottom). Layer thicknesses are system-dependent; confirm the specification for your project.

Technical data & application controls

Control the substrate, mix, application conditions and cure before handover.

SOURCE TECHNICAL DATA

SURFACE PREPARATION	New concrete floors should be cured a minimum of 28 days and dried below the stated moisture limit, with the surface free of laitance for adequate adhesion. Prime and allow the primer to cure fully; efficient sealing of the concrete is essential to minimise defects in the finishing coat.
MIXING / DILUTION	Mix ratio 3:1 (A:B) by weight; add all of Part B to the Part A container and mix with an electric mixer until homogeneous; do not dilute with thinner; pot life 8 hours at 25 °C
APPLICATION METHOD	Fine smooth lamb wool roller
COVERAGE	Material consumption 0.10 L/m² per coat
APPLICATION CONDITIONS	Confirm application temperature and humidity limits with the Rayson technical team.

CONDITIONS, PACKAGING & STORAGE

DRYING & CURING	Foot traffic 8 h at 25 °C; vehicular traffic 48 h; full chemical resistance 7 days. Recoat window 8–48 hours at 25 °C
RECOAT INTERVAL	Approximately 8–48 hours at 25 °C; allow longer before the second coat in cool weather.
FILM / THICKNESS	Thin roller finish in the order of 35 µm per coat.
PACK SIZES	Part A 4.5 kg can + Part B 1 kg can
STORAGE	Store in a cool, dry place.
SHELF LIFE	Approximately 12 months for the base and 6 months for the hardener, unopened.

04 APPLICATION WORKFLOW

1. **Inspect** — Assess substrate and conditions
2. **Prepare** — Mechanical preparation and repairs
3. **Mix** — Full packs at correct ratio
4. **Apply** — Within application conditions
5. **Recoat** — Within the system window
6. **Cure** — Before return to service

Figure 2 — Application workflow. Each stage is a hold point: confirm the previous stage is complete and within specification before proceeding.

Specify, apply and verify the system

05 RECOMMENDED SYSTEM

UV-stable coloured floor system

1. Prime prepared concrete with Rayson PrimeBond EP120-S and allow to cure completely
2. Apply 2 coats of Rayson TopShield PU420-S, the second within the recoat window

06 LIMITATIONS

- Do not dilute with thinner
- In cold weather, allow a longer cure before applying the second coat
- Solvent-based — provide adequate ventilation; not for occupied areas without ventilation control
- Requires a fully cured, efficiently sealing primer coat — surface defects telegraph through thin finishes

07 HEALTH & SAFETY

Solvent-based product — flammable. Ensure good ventilation, keep away from ignition sources, and wear gloves, eye and respiratory protection. Avoid skin and eye contact. Keep out of reach of children. Consult the Safety Data Sheet (in preparation) before use.

DISCLAIMER

The information in this data sheet is given in good faith and reflects typical values and general good practice. Because site conditions and workmanship are beyond our control, Rayson gives no warranty implied from this document; users should verify suitability for their specific application and confirm they are working from the current issue. For project-specific advice, contact the Rayson technical team.

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