POLYURETHANE FINISHES

TopShield PU445-W

WATER-BASED HYBRID URETHANE FINISH

Rayson TopShield PU445-W is a single-component, water-based hybrid urethane — a self-crosslinking acrylic-copolymer-enhanced polyurethane — that roller-coats concrete and mineral surfaces with a fast-drying, stain-resistant, anti-slip finish.

TopShield PU445-W packs urethane performance into a one-can product. The self-crosslinking acrylic-copolymer-enhanced polyurethane needs no hardener or mix ratio — open, stir and roll — which removes the most common site errors and suits maintenance teams as well as applicators.

KEY PROPERTIES

- Single component — no mixing errors, minimal wastage
- Fast-drying: overcoat in 1–3 hours, light traffic in 4–6 hours at 25 °C
- Stain-resistant, easy-to-clean, anti-slip finish
- Non-yellowing, interior or exterior use
- Abrasion resistance
- Anti-slip
- Fast return to service
- UV stability



Illustration — single pack. Pack size: see this data sheet.

MIX	COVERAGE	OPEN LIFE	SURFACE DRY	PACK SIZE
Ready to use	On request	Under 4 hours	1–3 hours	24 kg pail
single component	technical team	once opened	at 25 °C	single pack

01 RECOMMENDED USES

- Coloured coating over acrylic polymer cementitious coatings (APCC)
- Grey concrete walkways and commercial floors
- Hard surfaces such as stone and limestone
- Pavers, playgrounds and basketball courts

02 SUITABLE SUBSTRATES

- Mineral substrates and grey concrete
- Stone and limestone
- Pavers
- Acrylic polymer cementitious coatings

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	Surface must be dry and clean — free of poorly adhered old coatings, loose particles, dust, grease, oil, wax and biological growth. Fill and level defective or cracked areas with a suitable filler, allow to dry, sand level and remove dust before coating.
MIXING / DILUTION	Single component, ready to use; pot life stated as under 4 hours once opened and in use
APPLICATION METHOD	Brush, Roller
COVERAGE	Available from the Rayson technical team on request.
APPLICATION CONDITIONS	Ambient and surface temperatures should be at least 5 °C above the dew point.

CONDITIONS, PACKAGING & STORAGE

DRYING & CURING	Overcoat in 1–3 hours at 25 °C (substrate dependent); open to light traffic after 4–6 hours
RECOAT INTERVAL	Approximately 1–3 hours at 25 °C, subject to substrate conditions.
FILM / THICKNESS	Recommended film in the order of 130–150 µm per coat.
PACK SIZES	24 kg plastic pail
STORAGE	Store in a cool, dry area protected from heat and high humidity.
SHELF LIFE	Approximately 6–12 months 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

Fast-return walkway finish

1. Prepare, clean and make good the surface
2. Apply minimum 2 coats of Rayson TopShield PU445-W, overcoating within the recoat window

Anti-slip external ramp

1. Prime and texture with Rayson GripSafe AC620-W anti-slip primer filler
2. Finish with Rayson TopShield PU445-W in the selected colour

06 LIMITATIONS

- Ambient and surface temperatures must be at least 5 °C above the dew point
- Recommended wet film thickness approximately 130–150 microns per coat
- A thin-film finish, not a levelling or heavy-duty build product
- Shelf life shorter than two-pack products — rotate stock

07 HEALTH & SAFETY

Low-odour water-based product. Wear gloves and eye protection; ensure reasonable ventilation. 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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