WATER-BASED EPOXY SYSTEMS

TopShield EP410-W

WATER-BASED EPOXY PRIMER-AND-TOPCOAT

Rayson TopShield EP410-W is a two-component, water-based epoxy used as a self-priming primer-and-topcoat system on concrete, screed, asphalt and metal — including damp surfaces.

TopShield EP410-W is a water-dilutable two-component epoxy that works as its own primer and topcoat — one product, applied in successive coats, takes the floor from prepared concrete to a finished coloured seal coat. That self-priming simplicity cuts product count and programme risk on straightforward floors.

KEY PROPERTIES

- Self-priming — one product serves as primer and topcoat
- Water-based and suitable for unventilated areas
- Applies to dry or damp surfaces
- Good hiding power with high mechanical properties and anti-corrosive resistance
- Low odour



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

MIX RATIO	COVERAGE	POT LIFE	FINAL CURE	PACK SIZE
4:1	6–8 m²/kg	30 min	7 days	1 / 4 kg kits
A:B by weight	per coat	at 30 °C	temperature dependent	4+1 or 16+4 kg

01 RECOMMENDED USES

- Coloured seal coats on cementitious screeds
- Warehouse flooring and production floors in normal to medium-heavy exposure
- Car park deck coatings
- Self-priming primer-and-topcoat systems on new and existing concrete

02 SUITABLE SUBSTRATES

- New and existing concrete (minimum 28 days old, moisture content below 5%)
- Cementitious screeds, including highly absorbent substrates
- Asphalt
- Metal (mechanically prepared)
- Dry or damp surfaces (no standing water)

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	Substrate must be sound, clean and free of oil, grease, laitance, loose material and bond-inhibiting contaminants. Prepare concrete mechanically (captive shot blasting, milling or diamond grinding); remove weak concrete, open blowholes and voids, and reinstate imperfections with a suitable Rayson repair product. Vacuum all dust. New concrete should be at least 28 days old.
MIXING / DILUTION	Two pre-weighed parts, mix ratio 4:1 (A:B) by weight; mix mechanically for at least 2–3 minutes; pot life up to 30 minutes at 30 °C
APPLICATION METHOD	Roller, Brush, Airless spray
COVERAGE	6–8 m² per kg per coat, varying with substrate condition
APPLICATION CONDITIONS	Minimum substrate temperature 5 °C; substrate moisture content max 5%; minimum mixing temperature +10 °C; cure between +10 °C and +35 °C; prepared substrate pull-off strength above 1.5 N/mm².

CONDITIONS, PACKAGING & STORAGE

DRYING & CURING	Final cure 7 days
RECOAT INTERVAL	Available from the Rayson technical team on request.
FILM / THICKNESS	Available from the Rayson technical team on request.
PACK SIZES	Part A 4 kg / Part B 1 kg, or Part A 16 kg / Part B 4 kg per set
STORAGE	Minimum 12 months at 5–35 °C in unopened original packaging; protect from direct sunlight.
SHELF LIFE	Approximately 12 months unopened, in a cool area.

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

Self-priming seal coat system

1. Mechanically prepare and vacuum the substrate
2. Apply a first coat of Rayson TopShield EP410-W as the primer
3. Apply a second coat of Rayson TopShield EP410-W as the coloured topcoat

UV-stable variant for exposed areas

1. Apply Rayson TopShield EP410-W as primer and body coat
2. Finish exposed or daylight-flooded zones with Rayson TopShield PU430-W for colour stability

06 LIMITATIONS

- Minimum substrate temperature 5 °C; curing between +10 °C and +35 °C; concrete moisture content maximum 5%
- Mixed material must be used within its pot life; cures faster in hot weather and in large batches
- A thin-film seal coat — not intended for heavy-duty impact or thick-build duties
- Epoxy chemistry — will yellow and chalk under exterior UV exposure

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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