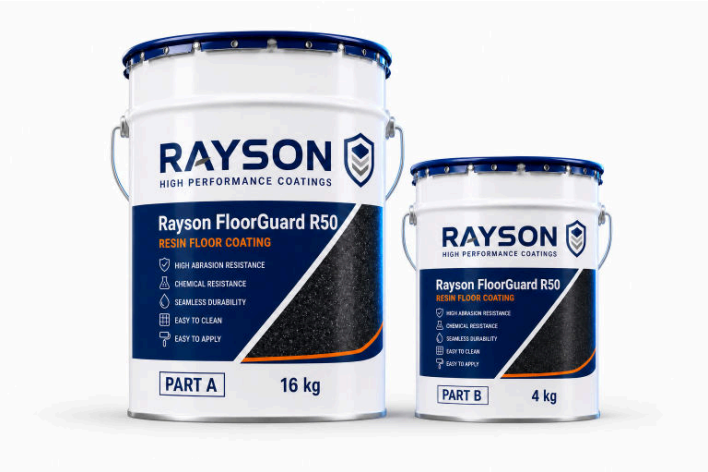
EPOXY FLOOR COATINGS

FloorGuard R50

SOLVENT-FREE HIGH-SOLIDS EPOXY FLOOR COATING

Rayson FloorGuard R50 is a two-component, solvent-free high-solids epoxy floor coating that cures to a smooth gloss — or a slip-resistant finish when broadcast with aggregate — for concrete and screed under normal to medium-heavy wear.

FloorGuard R50 is the general-purpose roller-applied epoxy in the Rayson range: a solvent-free, high-solids two-component coating that lays down a hard-wearing, low-maintenance film. Applied plain it finishes smooth and glossy; broadcast with graded aggregate between coats it builds a slip-resistant texture for ramps and wet zones.



KEY PROPERTIES

- Solvent-free high-solids epoxy — usable in unventilated areas
- Smooth gloss finish, or slip-resistant when broadcast with aggregate
- Hard-wearing with 55 N/mm² compressive strength
- Excellent adhesion to mechanically prepared concrete
- Low odour

MIX RATIO	COVERAGE	POT LIFE	FINAL CURE	PACK SIZE
4:1	0.3–0.5 kg/m²	30 min	7 days	20 kg set
A:B by weight	per coat	at 30 °C	temperature dependent	16 + 4 kg

02 RECOMMENDED USES

- Roller-applied epoxy floors on concrete and screed under normal to medium-heavy wear
- Warehouses and assembly areas, vehicle workshops, garages and ramps
- Sealing coat for broadcast (aggregate) systems
- Multi-storey and underground car park decks
- Wet process areas in the food and beverage industry
- Slip-resistant floors, using an aggregate broadcast between coats

03 SUITABLE SUBSTRATES

- New and existing concrete (minimum 28 days old, moisture content below 5%)
- Cementitious screeds
- Over a Rayson epoxy primer such as PrimeBond E20

05 SYSTEM ROLE

RAYSON FLOORGUARD R50 TOP COAT	2 coats
RAYSON PRIMEBOND E20 PRIMER	1–2 coats
PREPARED CONCRETE / SCREED	Mechanically prepared

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	0.3–0.5 kg/m² per coat, applied in 2 coats; varies 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	Recoat within the system recoat window once the previous coat is touch dry; timings temperature-dependent.
FILM / THICKNESS	Film is governed by consumption — two coats at 0.3–0.5 kg/m² per coat; a broadcast build adds thickness.
PACK SIZES	20 kg set — Part A 16 kg + Part B 4 kg
STORAGE	Minimum 12 months at 5–35 °C in unopened original packaging; protect from direct sunlight.
SHELF LIFE	Approximately 12 months unopened, subject to storage conditions.

07 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

08 RECOMMENDED SYSTEM

Roller coat epoxy floor system

1. Mechanically prepare and vacuum the substrate
2. Prime with Rayson PrimeBond E20 (1–2 coats)
3. Apply 2 coats of Rayson FloorGuard R50

Slip-resistant broadcast system

1. Prime with Rayson PrimeBond E20
2. Apply Rayson FloorGuard R50 and broadcast graded aggregate to refusal
3. Seal with a further coat of Rayson FloorGuard R50

09 LIMITATIONS

- Minimum substrate temperature 5 °C; mix and cure between +10 °C and +35 °C
- Substrate moisture content must not exceed 5%
- Prepared substrate must reach at least 1.5 N/mm² pull-off strength
- Mixed material must be used within its pot life; cures faster in hot weather and in large batches
- Requires a Rayson epoxy primer — not a self-priming system
- Not for exterior UV-exposed surfaces — epoxy yellows and chalks outdoors

10 HEALTH & SAFETY

Two-component product. Wear gloves, eye protection and suitable respiratory protection where ventilation is limited. Avoid skin and eye contact. Keep out of reach of children. Consult the Safety Data Sheet (in preparation) before use.

RAYSON HIGH PERFORMANCE COATINGS

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