CERAMIC-HYBRID FLOOR COATINGS

TopShield CH465-S

TWO-PART HYBRID CLEAR TOP COAT

Rayson TopShield CH465-S is a two-part, clear inorganic–organic hybrid top coat that cures to a hard, stain-resistant wearing surface on concrete, ceramic-hybrid (CH) colour systems and existing resin floors.

CH465-S pairs an inorganic backbone, for hardness, abrasion and stain resistance, with an organic component for toughness, adhesion and water resistance. It is mixed 3:1 by weight and applied in thin coats of about 0.10 kg/m²: two to three coats as a clear system on concrete, or one coat as the sealing coat over FloorGuard CH340-W or a prepared epoxy floor.



KEY PROPERTIES

- Hard, abrasion-resistant clear wearing surface
- Stain-resistant and easy to clean
- Resistant to water and common chemicals
- Bonds to concrete, cement mortar, epoxy floors, PVC tiles and stone
- Recoat in 4 hours; foot traffic after 12 hours

MIX RATIO	COVERAGE	POT LIFE	FULL CURE	PACK SIZE
3:1	0.10–0.15 kg/m²	40 min	72 h	18 kg set
A:B by weight	per coat	at 20 °C	foot traffic after 12 h	13.5 + 4.5 kg

01 RECOMMENDED USES

- Clear finishing coat for car park, warehouse and office floors
- Sealing coat over FloorGuard CH340-W coloured systems
- Clear system on old or polished concrete with PrimeBond CH145-S
- Upgrading epoxy, PVC-tile and stone floors with a harder, stain-resistant surface
- Dry storage and circulation areas in food, pharmaceutical and healthcare buildings

02 SUITABLE SUBSTRATES

- Concrete and cement mortar primed with PrimeBond CH145-S or CH460-S
- FloorGuard CH340-W colour coat, fully dry (24 hours at 20 °C)
- Existing epoxy floors, PVC tiles and stone such as marble — abrade where needed and test first

03 SYSTEM ROLE

RAYSON TOPSHIELD CH465-S CLEAR TOP COAT	This product · 0.10 kg/m² per coat
RAYSON FLOORGUARD CH340-W COLOUR COAT	Coloured systems · 2 coats
RAYSON PRIMEBOND CH140 / CH145-S PRIMER	0.10–0.15 kg/m²
PREPARED CONCRETE OR EXISTING EPOXY FLOOR	Ground, or abraded and cleaned

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	The surface below must be clean, dry and free of dust. Concrete: prepare mechanically and prime with PrimeBond CH145-S or CH460-S. FloorGuard CH340-W: allow 24 hours at 20 °C. Existing epoxy, PVC or stone floors: clean, abrade to a uniform key where needed and confirm adhesion on a test area.
MIXING / DILUTION	Shake or stir each part. Pour Part B into Part A (3:1 by weight, 13.5 kg : 4.5 kg) and mix for at least 3 minutes with a slow-speed electric mixer (about 600 rpm). Use within 40 minutes at 20 °C — sooner in hot weather. Do not dilute.
APPLICATION METHOD	Roller, brush or spray.
COVERAGE	0.10–0.15 kg/m² per coat. Clear system: two to three coats. Over FloorGuard CH340-W or epoxy: one coat at 0.10 kg/m².
APPLICATION CONDITIONS	Substrate dry, with concrete moisture content below 8%, and at least 3 °C above dew point. Protect from rain, water and condensation during cure. Ventilate enclosed areas.

CONDITIONS, PACKAGING & STORAGE

DRYING & CURING	Foot traffic after 12 hours; full hardness after 72 hours at 20 °C.
RECOAT INTERVAL	4 to 24 hours between coats. After 24 hours, abrade lightly and clean before recoating.
FILM / THICKNESS	About 50 µm per coat; about 100 µm in two coats. Build in thin coats, never one heavy coat.
PACK SIZES	18 kg set: Part A 13.5 kg, Part B 4.5 kg.
STORAGE	Store sealed in original packaging in a cool, dry, shaded place at 5–30 °C. Keep away from heat and direct sunlight.
SHELF LIFE	12 months unopened.

04 APPLICATION WORKFLOW

1. **Inspect** — Assess substrate and conditions
2. **Prepare** — Mechanical preparation and repairs
3. **Mix** — Full packs at 3:1 by weight
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

Clear system on concrete

1. Grind, repair and vacuum the concrete floor
2. Prime with one coat of Rayson PrimeBond CH145-S at about 0.15 kg/m²
3. Apply two coats of Rayson TopShield CH465-S at 0.10 kg/m² each, at least 4 hours apart

Clear upgrade over an epoxy floor

1. Install or retain a sound epoxy floor — for example Rayson PrimeBond EP110 and Rayson FloorGuard EP310
2. Clean the cured epoxy, abrade to a uniform matt key and vacuum
3. Apply one coat of Rayson TopShield CH465-S at 0.10 kg/m² — confirm adhesion on a test area first

06 LIMITATIONS

- Substrate must be dry (concrete moisture content below 8%) and free of dust and contamination
- Use mixed material within its pot life; pot life is shorter in hot weather and in large batches
- Thin-film coating — it does not level rough surfaces or bridge moving cracks
- Smooth clear finishes can be slippery when wet — specify anti-slip aggregate where needed
- Not for hot wash-down, thermal-shock or permanently wet areas — use Rayson FloorGuard PC330-W
- Always complete a test area on existing coatings, PVC tiles and stone

07 HEALTH & SAFETY

Two-part reactive product. Wear gloves and eye protection and ensure good ventilation, particularly when spraying. Avoid skin and eye contact — reactive resins can irritate and sensitise skin. Keep away from heat and ignition sources. 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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