CERAMIC-HYBRID FLOOR COATINGS

# TopShield CH460-S

## TWO-PART HYBRID HARDENER & PRIMER COAT

Rayson TopShield CH460-S is a two-part, clear inorganic–organic hybrid coat that penetrates concrete and cures to a hard, dust-free, stain-resistant surface. It is used as a floor hardening system or as the primer coat under TopShield CH465-S.

CH460-S pairs an inorganic backbone, for hardness and abrasion resistance, with an organic component for adhesion and toughness. Applied in three thin coats, with polishing after the first, it hardens and seals warehouse and factory slabs without a thick film. Because it forms its own thin wear surface, the result depends less on slab quality than with a conventional silicate hardener.




### KEY PROPERTIES

- Penetrates and binds the concrete surface
- Hard, abrasion-resistant, dust-free finish
- Stain-resistant and easy to clean
- Resistant to water and common chemicals
- Foot traffic after 12 hours; full hardness in 72 hours

| MIX RATIO | COVERAGE | POT LIFE | FULL CURE | PACK SIZE |
|---|---|---|---|---|
| **5:1** | **0.35 kg/m²** | **40 min** | **72 h** | **18 kg set** |
| A:B by weight | 3-coat hardening system | at 20 °C | foot traffic after 12 h | 15 + 3 kg |

## 01 RECOMMENDED USES

- Hardening and dust-proofing concrete floors in warehouses, factories and car parks
- Clear sealing of concrete and cement mortar floors in offices and plant areas
- Primer coat under TopShield CH465-S clear top coat
- Upgrading the surface of existing concrete, mortar, epoxy and stone floors

## 02 SUITABLE SUBSTRATES

- New (fully cured) and old concrete, cement mortar and screed; moisture content below 8%
- Existing epoxy floors and natural stone such as marble — test area first
- Other substrates: confirm suitability with the technical team

## 03 SYSTEM ROLE

| | |
|---|---|
| RAYSON TOPSHIELD CH460-S — COATS 2 AND 3 | This product · 0.10 kg/m² each, after polishing |
| RAYSON TOPSHIELD CH460-S — COAT 1 | This product · 0.15 kg/m², penetrating coat |
| PREPARED CONCRETE SUBSTRATE | Repaired, ground and vacuumed |

*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 | Concrete must be dry and clean, with moisture content below 8%. Repair cracks and damaged areas first. Remove laitance, dust, oil, old coatings and efflorescence by grinding, sanding or blasting, then vacuum thoroughly. |
| MIXING / DILUTION | Shake or stir each part. Mix Part A : Part B = 5:1 by weight (15 kg : 3 kg) for 2 minutes with a slow-speed mixer (about 600 rpm). Use within 40 minutes at 20 °C — sooner in hot weather. Do not dilute. |
| APPLICATION METHOD | Roller, rubber rake, brush or airless spray. |
| COVERAGE | Hardening system: coat 1 at 0.15 kg/m², coats 2 and 3 at 0.10 kg/m² each (0.35 kg/m² in total). As a primer coat: 0.10–0.15 kg/m². |
| APPLICATION CONDITIONS | Apply to a dry substrate 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 and light work after 12 hours; full hardness after 72 hours at 20 °C. |
| RECOAT INTERVAL | 4 to 24 hours between coats. In the hardening system, polish and burnish between coat 1 and coat 2. |
| FILM / THICKNESS | Thin, penetrating coats — consumption governs film. Build in two to three coats, never one heavy coat. |
| PACK SIZES | 18 kg set: Part A 15 kg, Part B 3 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

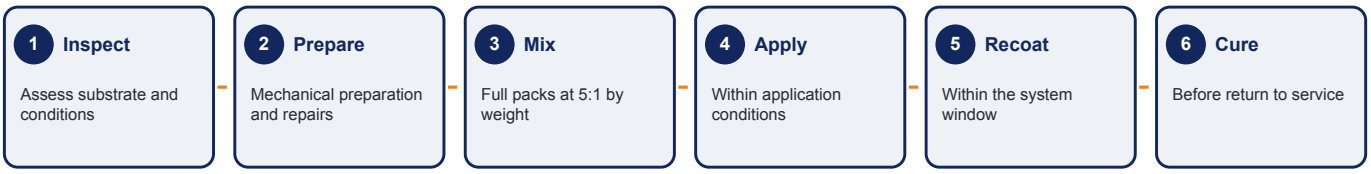



*Figure 2 — Application workflow. Each stage is a hold point: confirm the previous stage is complete and within specification before proceeding.*

# Specify, apply and verify the system

## 05 RECOMMENDED SYSTEM

### Concrete hardening system

1. Clean the floor, repair cracks and damaged areas, grind and vacuum
2. Apply coat 1 of Rayson TopShield CH460-S by roller at 0.15 kg/m²
3. After at least 4 hours, polish and burnish with a floor polishing machine
4. Apply coats 2 and 3 at 0.10 kg/m² each by rubber rake, roller or airless spray, at least 4 hours apart

### Primer coat under TopShield CH465-S

1. Prepare, repair and vacuum the concrete
2. Apply one coat of Rayson TopShield CH460-S at 0.10–0.15 kg/m²
3. Without polishing, apply Rayson TopShield CH465-S clear top coat within 4 to 24 hours

## 06 LIMITATIONS

- Substrate must be dry (moisture content below 8%), clean and repaired before coating
- Use mixed material within its pot life; pot life is shorter in hot weather and in large batches
- Thin-film system — it does not level rough concrete or bridge moving cracks
- Polished, hardened floors can be slippery when wet — assess slip resistance for wet areas
- Always complete a test area on existing coatings 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.

RAYSON HIGH PERFORMANCE COATINGS
Veritas Nova Private Limited · UEN 202650473C
Singapore
Tel / WhatsApp: +65 9821 9129
support@raysonpaint.com.sg
raysonpaint.com.sg/products/topshield-ch460/