

## STRUCTUROC H

High Strength Rapid Setting Mortar for Horizontal Repairs

**STRUCTUROC H** is a rapid setting, high early strength repair mortar that produces a fast, permanent repair of concrete. **STRUCTUROC H** is dimensionally stable, shrinkage and crack resistant and forms an integral bond with the existing concrete to restore its structural integrity. **STRUCTUROC H** is designed for horizontal repairs and can be placed at thicknesses ranging from 16 mm (5/8") up to 75 mm (3") in a single lift. This product can be extended with up to 50% of clean dry 10 mm (3/8") granitic or clean pea gravel aggregate to then produce a rapid setting concrete for repair. The maximum thickness can then be increased up to 300 mm.

### USES

Repair of spalled and damaged concrete floors due to wear, abrasion, temperature and other damage factors.

#### TYPICAL USES:

- Fast repair and return to service of damaged industrial concrete floor
- Deep repairs to concrete floors prior to the installation of **SOLHYDROFLOW** self-leveling products
- Repair and creation of concrete slopes, drains and trenches
- Repair of concrete walls, bases and columns
- Repair of bridge decks, parking decks and ramps

### PRODUCT FEATURES

- Meets or exceeds requirements of ASTM C928/C928M-09
- Permanent repair of concrete
- Excellent bond strength
- Dimensionally stable, resistant to shrinkage and cracking
- Can be applied at variable thicknesses
- Freeze/thaw resistant
- Extremely resistant to wear and abrasion
- Rapid and early strength
- No bonding agent required
- Easy to use
- Meets MTQ requirements
- Accepts pedestrian traffic after 2hrs and heavy traffic after 6-8hrs
- Can be covered after 12 hours

### SURFACE PREPARATION

Proper repairs depend upon a solid bond between mortar and base concrete surface. Thoroughly clean and roughen subject area. Remove any curing compound, grease, oil, loose carbonated concrete, dirt, dust, etc... from exposed slab. Sawcut area perimeter to a depth of at least 6 mm (1/4"). Use water under moderate pressure to flush and further clean area. If possible, saturate area at least 12 hours prior to applying mortar. During application, area should be saturated but free of standing water.

### PRIMING

No primer required.

### PRODUCT MIXING

Place mixing equipments close to repair area. Approximate initial set of **STRUCTUROC H** is 30 minutes @ 21°C (70°). Therefore mix only an amount that can be placed and finished before initial set. Always mix by adding the dry product to the mixing water. For every 2.3 L to 2.4 L (0,60 US gal to 0,63 US gal) of water add a bag of **STRUCTUROC H**. Use a mortar mixer or 3/4" Heavy Duty drill with mixing paddles. Place the measured water into a clean mixing container. Slowly and gradually add the powder while mixing for a minimum of 2 to 3 minutes in order to obtain a uniform consistency. Dispense directly into worksite or wheelbarrows. Discard any material that stiffens. Do not retemper. For large pours or for temperatures that are below 5°C (40°F) or above 35°C (95°F), contact your local **SOLHYDROC** representative.

### PHYSICAL MATERIAL PROPERTIES @ 21°C (70°F)

| COMPRESSIVE STRENGTH ASTM C109-93<br>2" (50 MM) CUBES |                         |            | BOND STRENGTH ASTM C882                        |            |                                                |
|-------------------------------------------------------|-------------------------|------------|------------------------------------------------|------------|------------------------------------------------|
| 1 hour                                                | 13.8 MPa                | (2000 psi) | 1 day                                          | 17.9 MPa   | (2600 psi)                                     |
| 3 hours                                               | 27.6 MPa                | (4000 psi) | 3 days                                         | 20.7 MPa   | (3000 psi)                                     |
| 1 day                                                 | 41.4 MPa                | (6000 psi) | <b>HARDENING</b>                               |            | <b>RAPID CHLORIDE PERMEABILITY ASTM C-1202</b> |
| 3 days                                                | 51.7 MPa                | (7500 psi) | Working time                                   | 25 minutes |                                                |
| 7 days                                                | 55.2 MPa                | (8000 psi) | Initial set time ASTM C191                     | 30 minutes |                                                |
| 28 days                                               | 66.6 MPa                | (9600 psi) | Final set time ASTM C191                       | 40 minutes |                                                |
| FLEXURAL STRENGTH ASTM C78                            |                         |            | SCALING RESISTANCE ASTM C672                   |            |                                                |
| 7 days                                                | 8.2 MPa                 | (1200 psi) | 50 cycles                                      | 0 loss     | 97 gr/m <sup>2</sup>                           |
| FREEZE/THAW RESISTANCE ASTM C666 B MODIFIED           |                         |            | LENGTH CHANGE ASTM C157 WITH C928 MODIFICATION |            |                                                |
| Cycles                                                | Durability factor (RDF) |            | Time                                           | Air cure   | Water cure (immersion)                         |
| 300                                                   | 96%                     |            | 7 Days                                         | - 0.0520%  | - 0.0005%                                      |
|                                                       |                         |            | 28 Days                                        | - 0.0620%  | - 0.0140%                                      |

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### PRODUCT APPLICATION

#### PLACING:

No bonding agent is required with **STRUCTUROC H**. Immediately upon completion of mixing, place material in repair area. Place from one side of site only; not toward middle from opposite directions.

#### FINISHING:

Level and screed material to proper height. Float edges with wooden or magnesium trowel only.

### CURING

As soon as the repaired surface has sufficiently hardened apply water and wet burlap or rags to finished area and cover with polyethylene or keep water ponded on patch, for a minimum of 2 hours.

### ESTIMATING/YIELD

**STRUCTUROC H** in 22.7 kg (50 lbs) bag yields 12 L (0.42 ft<sup>3</sup>) of material when mixed with 2.3 L to 2.4 L (0,60 US gal to 0,63 US gal) of clean potable water and will cover approximately 0.95 m<sup>2</sup> (10 ft<sup>2</sup>) at a thickness of 12 mm. This product, when extended with 50% of 10 mm granitic or clean pea gravel aggregate, will yield 16 L (0.56 ft<sup>3</sup>) of material.

#### Coverage: Per 22.7 kg (50 lbs) bag.

| <u>Nominal Thickness</u> | <u>Approximate Coverage</u>               |
|--------------------------|-------------------------------------------|
| 6 mm (1/4")              | 1.9 m <sup>2</sup> (20 ft <sup>2</sup> )  |
| 12 mm (1/2")             | 0.95 m <sup>2</sup> (10 ft <sup>2</sup> ) |
| 25 mm (1")               | 0.47 m <sup>2</sup> (5 ft <sup>2</sup> )  |

### PRECAUTIONS/RESTRICTIONS

- Apply to pre saturated surface only
- Do not apply on fresh concrete
- Do not use bonding agent
- Do not apply at temperature under 5°C (41°F)
- Do not add admixture to this product
- Do not use limestone as fill aggregate

### PACKAGING

#### STRUCTUROC H

bags 22.7 kg (50 lbs)  
Qty: 56 bags per pallet

### RECOMMENDED TOOLS

The following tools will assure a cost effective, satisfactory installation:

- Steel, Wooden or Magnesium Trowels
- 3/4" Heavy Duty drill with mixing paddles
- Mortar mixer (for large volume)

### CLEANING

Use water to clean all tools immediately after use.

### STORAGE

Store in cool dry area avoiding all moisture. Can be kept in unopened bags for 12 months.

### SECURITY

See Material Safety Data Sheet. Contains Portland cement and silica sand. May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water. Avoid breathing dust.

### ELIGIBLE LEED® CREDITS: 3

Regional Materials (MR 5.1 & 5.2)  
2 Points  
Low Emitting Materials (EQ 4.1)  
1 Point

SOLHYDROC WARRANTS that the product conforms to its chemical description and is reasonably fit for the purpose stated on its Technical Bulletin when used in accordance with its directions. SOLHYDROC makes NO OTHER WARRANTY either expressed or implied. Buyer assumes all risk in handling.

*For Professional Use Only*

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