



# STRUCTUROC H-ULTRA-MODIFIED

High Strength Mortar  
with Prolonged Working Time

STRUCTUROC H ULTRA-MODIFIED is a high early strength repair material, modified to provide for longer setting times and requires only the addition of water to produce a permanent repair for concrete. STRUCTUROC H ULTRA-MODIFIED is dimensionally stable and forms an integral bond with the existing concrete to restore its structural integrity. STRUCTUROC H ULTRA-MODIFIED is designed for horizontal repairs and can be placed at thicknesses ranging from 1/4" (6 mm) up to 2" (50 mm) in a single lift. For application up to 12" (300 mm), this product can be extended with up to 50% of clean pea gravel to produce a high strength repair concrete.

## ■ USES

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

### TYPICAL USES:

- Fast repair and return to service of damaged industrial concrete floor
- Repairs to concrete floors prior to the installation of SOLHYDFLOW 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
- Repair of balconies

## ■ PRIMING

No primer required.

## ■ PRODUCT FEATURES

- Prolonged working time
- Easy to pump & pour and easy to finish
- 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
- Can be overcoated within 16 hours after placement
- Accept light traffic after 3hrs and heavy traffic after 8-10hrs

## ■ SURFACE PREPARATION

Proper repairs depend upon a solid bond between mortar and base 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 1/4" (6 mm). 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.

## PHYSICAL MATERIAL PROPERTIES @ 22,2°C (72°F)

COMPRESSIVE STRENGTH ASTM 109*, 2" (50 MM) CUBES		
3 hours	20.0 MPa	3,000 psi
1 day	40.0 MPa	5,000 psi
3 days	48.0 MPa	7,000 psi
7 days	59.0 MPa	8,500 psi
28 days days	70.0 MPa	10,000 psi
FREEZE/THAW RESISTANCE ASTM C-666 B		
Cycles	Durability factor (RDF)	
300	96.0 %	
FLEXURAL STRENGTH ASTM C78		
7 days	8.2 MPa	1,200 psi

HARDENING		
Initial set time ASTM C-191		65 minutes
Final set time ASTM C-191		85 minutes
BOND STRENGTH ASTM C-882		
1 day	8.8 MPa	1,300 psi
7 days	12.2 MPa	1,800 psi
SCALING RESISTANCE ASTM C-672		
50 cycles	0	Loss 150 gr/m²
LENGTH CHANGE ASTM C-157 WITH C-928 MODIFICATION		
Time	Air cure	Water cure (immersion)
7 days	- 0.049	+ 0.027
28 days	- 0.060	+ 0.032



# STRUCTUROC H-ULTRA-MODIFIED

High Strength Mortar  
with Prolonged Working Time

## ■ PRODUCT MIXING

- Place mixers on proximity to repair area.
- Approximate initial set of STRUCTUROC H ULTRA-MODIFIED is 90 minutes @ 72°F (22°C).
- Mix only an amount that can be placed and finished before initial set.
- Place recommended amount of clean water into mixer, add STRUCTUROC H ULTRA-MODIFIED, mix for 2 minutes (if extended, add aggregate at this point) and continue to mix until a smooth mixture is obtained.
- Dispense directly into pump or wheelbarrows.
- Discard any material that stiffens.
- Do not retemper.
- For large pours or temperatures that are below 41°F (5°C) or above 85°F (35°C) contact your local BMQ SOLUTIONS representative.

## ■ PRODUCT APPLICATION

No bonding agent is necessary with STRUCTUROC H ULTRA-MODIFIED. Upon completion of mixing, place material in repair area. Place from one side of site only; not toward middle from opposite directions.

## ■ CURING

Level and screed material to proper height. Float edges with wooden or magnesium trowel only. As soon as the repaired surface has sufficiently hardened apply 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 ULTRA-MODIFIED is packaged in 50 lbs (22.7 kg) polyethylene bags or plastic pails. Yields 0.42 ft<sup>3</sup> (12 L) when mixed with 2 1/2 quarts (2.4 L) of potable water that will cover approx. 11 ft.<sup>2</sup> (1m<sup>2</sup>) at a thickness of 1/2" (12 mm). This product when extended with 50%, by volume, of 3/8" (10 mm) pea gravel and will yield 0.56 ft<sup>3</sup> (16 L) of volume. Also available in 4.5 kg pails.

## ■ 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 41°F (5°C)
- Do not add admixture to this product

## ■ PACKAGING

### STRUCTUROC H-ULTRA-MODIFIED:

2,7 kg (50 lbs) bags  
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.

## ■ SAFETY

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.

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

*For Professional Use Only*