

# REPCON SHB

## ONE PART, MODIFIED OVERHEAD REPAIR

### DESCRIPTION

**REPCON SHB** is a single component, microsilica and latex modified, non sag repair mortar. This cement based product is designed for trowel applied vertical and overhead repairs requiring a performance oriented material.

### FEATURES & BENEFITS

- One component for easy mixing and handling.
- High bond strength provides excellent adhesion.
- Normal setting times increase workability and reduce waste.
- Microsilica and latex modified for high in place performance.
- Contains no chlorides.
- Highly impermeable repair mortar prevents the ingress of carbon di-oxide and chlorides which causes the corrosion of reinforcement steel.

### BASIC USES

- Resurfacing damaged or deteriorated concrete.
- Vertical and overhead repairs.
- Parking and bridge structures.
- Parapet walls.
- Marine structures.
- Tunnels and dams.
- Above and below grade applications.

### SPECIFICATIONS / COMPLIANCES

- REPCON SHB attains a bond strength meeting the requirements of ASTM C 1059-86, Type II systems

### TECHNICAL INFORMATION

Typical Engineering Data

Compressive Strength

ASTM C 109 modified, 50 mm cubes

|         |                      |
|---------|----------------------|
| 1 days  | 2,500 psi (17.2 MPa) |
| 3 days  | 3,500 psi (24.1 MPa) |
| 7 days  | 4,500 psi (31.0 MPa) |
| 28 days | 5,500 psi (37.9 MPa) |

**Bond Strength** ASTM C 882 modified

Slurry Coat

|         |                      |
|---------|----------------------|
| 1 day   | 1,100 psi (7.5 MPa)  |
| 3 days  | 1,500 psi (10.3 MPa) |
| 7 days  | 2,000 psi (13.8 MPa) |
| 28 days | 2,200 psi (15.2 MPa) |

**Flexural Strength** ASTM C 348

|         |                   |
|---------|-------------------|
| 1 day   | 500 psi (3.4 MPa) |
| 3 days  | 600 psi (4.1 MPa) |
| 28 days | 900 psi (6.2 MPa) |

**Tensile Strength** ASTM C496

|         |                   |
|---------|-------------------|
| 1 day   | 230 psi (1.6 MPa) |
| 7 days  | 400 psi (2.7 MPa) |
| 28 days | 610 psi (4.2 MPa) |

Working Time : 30 minutes

Initial Set : 1 hour

Final Set : 2 1/2 hours

**Water absorption:** 2% ASTM C 642

Co-efficient of Thermal Expansion : 8 to 12 X 10<sup>-6</sup> °C.

Alkali Content : 2.8 kg x m<sup>3</sup> approx.

### Chemical Resistance :

REPCON SHB exhibits excellent resistance against : Chloride Ions, Water, Acid gases

### DIRECTIONS FOR USE

**Surface Preparation** - The concrete must be clean and rough. All oil, dirt, debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a bushhammer, sandblaster or jackhammer which will give a surface profile of a minimum 3.2 mm and expose the coarse aggregate of the concrete. The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing.

**Exposed Reinforcing Steel** - Exposed rebar may be treated with an anti-corrosion coating such as **ZINC RICH PRIMER**. Remove all loose rust and scaling, preferably by sandblasting to white metal prior to coating the rebar.

**Bonding** - After the surface has been prepared, all areas must be primed with EPOPRIME LP or with a slurry coat of REPCON SHB . Produce a slurry coat of this product by mixing the material as indicated below and then add 0.5 liter of **CEMPOL ACRYLIC** to the mix

**Mixing** - Product is normally mixed with a drill and "jiffy" type mixer. Use a paddle type mortar mixer for large placements. Note : Do not mix more material than can be placed within 20 minutes. Add the appropriate amount of water for the batch size and then add the dry product. Mix for a minimum of 5 minutes. The mixed product should be quickly transported to the repair area and placed immediately.

|                         |   |
|-------------------------|---|
| <b>COVERAGE</b>         | REPCON SHB will cover approximately 1.0 m <sup>2</sup> when placed at an average depth of 13 mm. REPCON SHB may be placed at thicknesses ranging from 6 mm to 50 mm.                            |
| <b>PACKAGING/ YIELD</b> | REPCON SHB is packaged in 25 kg bags. Yield is 0.013 m <sup>3</sup> per bag when mixed with 4.75 Ltrs. of water. Note : This product requires curing compound which must be ordered separately. |
| <b>COLOR</b>            | Contact CMCI Tech Dept.   |

**Placement** - Product should be placed in lifts 6 to 25 mm thickness. Trowel into place and allow to stiffen before the next lift. Multiple lifts may be placed as long as the total recommended depth is not exceeded. If additional lifts will be placed after the product has hardened, cross hatch the surface of the previous lift to provide for a secure bond for the next lift.

**Finishing** - Finish the repair material to the desired texture and/or to match the surrounding concrete. Do not add water to the surface during the finishing operation.

**Curing and Sealing** - Proper curing procedures are important to ensure the durability and quality of the repair. To prevent surface cracking, cure the repair mortar with a high solids curing compound, such as KUREKOTE 75 VOX

**NOTE:** Solvent based curing compounds are not recommended to use on this product. In hot, windy or direct sunlight situations, apply a second coat of curing compound after the initial coat is dry. Curing compound must be ordered separately. If a curing compound is not desired, cover with polyethylene sheeting for a minimum of three (3) days. Followed by normal concrete curing procedures.

#### **CLEAN-UP**

Clean tools and equipment with water before the material hardens.

#### **SHELF LIFE:**

1 year in unopened pack when stored properly.

#### **HEALTH & SAFETY**

- In adverse temperatures, follow ACI recommendations for hot/cold weather concreting practices.
- Use only potable water for mixing.
- Minimum application thickness 6 mm
- Minimum surface and ambient temperature 7°C and rising at a time of application.
- Store product in a dry place.

#### **Quality Statement**

CMCI manufactures its products at their manufacturing facility in Saudi Arabia as per the Quality Procedures certified to conform with quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high performance construction products CMCI also offers full technical field support to consultants, Architects, contractors, applicators and End Users.

**"High Quality Construction Chemicals"**  
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The Technical Specification information and recommendations given are based on the current technical knowledge and the user or his representative is recommended to check the suitability of the product CMCI reserves the right to amend the technical characteristic of the product as part of ongoing research and development. As the work execution is beyond the direct and continuous control of CMCI no guaranty and or responsibility is assumed on the performance of work completion executed with use of our products.