

## SUPER-TOP OV

Super-Top OV is a high performance, one component, rapid setting, polymer modified concrete repair mortar for overhead and vertical applications. It is a non-shrink formulation containing corrosion inhibitor and micro-synthetic fibers. It is ideal for any structural or cosmetic concrete repair.

### FEATURES & BENEFITS

- Light weight for high build in vertical or overhead applications.
- Non-shrink to provide structural repair of holes or cracks.
- Contains corrosion inhibitor to reduce chloride induced corrosion.
- Contains micro-synthetic fibers to reduce the possibility of plastic shrinkage cracks.
- Excellent bond to existing concrete or masonry.
- Excellent resistance to freeze/thaw cycling.
- Rapid setting for minimal turnaround time.
- All King products are manufactured using ISO 9001:2000 Certified Processes.

### USES

- Partial depth rehabilitation of concrete beams, columns, and/or soffits in bridges, parking garages, balconies or other concrete structures.

### PROCEDURES

#### Surface Preparation:

All surfaces to be in contact with Super-Top OV must be free from dust, oil, grease or any other foreign substances that may interfere with the bond of the material. Remove all delaminated or unsound concrete, providing a roughened surface. The perimeter of the repair area should be saw-cut a minimum of 6 mm (1/4 inch). Clean the area to be repaired with potable water, leaving the concrete saturated but free of standing water (SSD). For maximum bond strength use KING Concrete Adhesive.

### MIXING

Place 75% of required potable water into mixer and slowly introduce entire bag of Super-Top OV. Add balance of required water slowly while mixer is running, not exceeding maximum recommended volume of water. **Recommended volume of water is 2.4 to 2.6 litres (0.6 to 0.75 US gallon) per 18.5 kg bag.** Continue mixing for a minimum of 3 minutes until material has obtained a consistent homogeneous mix.

Super-Top OV sets rapidly. Mix only an amount that can be placed and leveled within 15-20 minutes. If necessary, reduce the batch size while maintaining the same water/materials ratio. Do not add additional water or re-temper after initial mixing procedure.

Vertical / Overhead : Adjust consistency by using less water to make a stiffer mix.

### PLACING

Mix and substrate temperatures should be maintained between 5 and 30°C (40 and 86°F). Scrub bonding mixture into the repair area being sure to fill all voids and pores. Coat any exposed reinforcing steel with bond coat. Do not allow bond coat to dry before placement of mortar.

Place Super-Top OV in lifts of not more than 50 mm (2 inches). Consolidate by forcing against the edge of the repair area and continue placing material towards the centre. The top surface of each lift must have a 3 – 6 mm (1/8 – 1/4 inch) raked profile.

Keep surface of each lift damp with fog spray, sprinkler hose or brush. Apply next layer within 15-20 minutes. When design depth is obtained, finish final placement to match surrounding surface texture.

### CURING

Curing is essential to optimize the physical properties of Super-Top OV and minimize plastic shrinkage. Super-Top OV should be cured immediately after material has reached initial set in accordance with ACI 308 "Guide to Curing Concrete". Continuously moist cure for a period of 24 hours. Alternatively, apply King Duro-Cure curing compound or a water-based curing compound that complies with ASTM C 309. Curing is particularly critical in rapid moisture loss conditions such as high temperatures, high winds and low humidity.

### TECHNICAL DATA

The following data is representative of typical values achievable under laboratory conditions. Results in the field may vary.

#### WORKING TIME @ 21.1°C (70°F)

20 minutes minimum

#### SET TIME

##### ASTM C 191

##### METHOD A

**Initial Set** 25 minutes

**Final Set** 45 minutes

#### COMPRESSIVE STRENGTH

##### ASTM C 109

**1 Hr** 15 MPa (2200 psi)

**1 Day** 25 MPa (3600 psi)

**7 Day** 30 MPa (4300 psi)

**28 Day** 35 MPa (5000 psi)

#### BOND STRENGTH BY SLANT SHEAR

##### ASTM C 882

**1 Day** 10 MPa (1400 psi)

**28 Day** 12 MPa (1700 psi)

#### FLEXURAL STRENGTH

##### ASTM C 348

**28 Day** 5 MPa (725 psi)

#### MODULUS OF ELASTICITY

##### ASTM C 469

24.8 GPa (3.0 x 10<sup>6</sup> psi)

#### HARDENED HEIGHT CHANGE

##### ASTM C 1090

**28 Day** 0.08 %

#### SPLIT TENSILE STRENGTH

##### ASTM C-496

**7 Day** 4 MPa (580 psi)

**28 Day** 4.25 MPa (600 psi)

## SUPER-TOP OV

### EXPANSION

**ASTM C-490**

28 Day                      100%RH +0.03%

### FREEZE-THAW DURABILITY

**NYS DOT Test Method 502-3P**

1.7% loss after 50 cycles

### OPTIMUM PERFORMANCE

For repair applications exceeding 38 mm (1 ½ inch), use LM-S10 Concrete or contact your King technical sales representative.

### YIELD

18.5 kg (40.8 lb.) bag contains approximately 0.012 m<sup>3</sup> (0.36 ft<sup>3</sup>).

### PACKAGING

Super-Top OV is normally packaged in 18.5 kg (40.8 lb.) triple lined bags and poly wrapped on wooden pallets. All KING products can be custom packaged to suit specific job requirements.

### STORAGE AND SHELF LIFE

Material should be stored in a dry covered area protected from the elements. Unopened bags have a shelf life of 12 months.

### SAFETY PROCEDURES

Super-Top OV contains hydraulic cements. Normal safety-wear such as rubber gloves, dust mask and safety glasses used to handle conventional cement based products should be worn. Material Safety Data Sheets are available upon request.

.....  
This product is designed to meet the performance specifications outlined in this product data sheet. If the product is used in conditions for which it was not intended, or applied in a manner contrary to the written recommendations contained in the product data sheet, the product may not reach such performance specifications. The foregoing is in lieu of any other warranties, representations or conditions, expressed or implied, including, but not limited to, implied warranties or conditions of merchantable quality or fitness for particular purposes, and those arising by statute or otherwise in law or from a course of dealing or usage of trade.

V0709

### KING PACKAGED MATERIALS COMPANY

**Burlington Office**  
3385 Harvester Rd.  
Burlington, ON  
L7N 3N2  
Phone: (905) 639-2993  
Fax: (905) 333-3730

**Blainville Office**  
650 Boul. Labelle  
Blainville, QC  
J7C 2J2  
Phone: (450) 430-4104  
Fax: (450) 430-6855

**Brantford Office**  
541 Oak Park Rd.  
Brantford, ON  
N3T 5L8  
Phone: (519) 756-6177  
Fax: (519) 756-7490

**Sudbury Office**  
644 Simmons Rd.  
Dowling, ON  
P0M 1R0  
Phone: (705) 855-1155  
Fax: (705) 855-1122