

VERTICAL OVERHEAD (V/O) STRUCTURAL REPAIR MORTAR

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PRODUCT

TARGET® Vertical & Overhead (V/O) Structural Repair Mortar is a single component, polymer modified and fast setting repair mortar. It is a premixed product containing accurately measured quantities of hydraulic cement, graded sand, polymers and other admixtures. It is formulated for repairing of overhead and vertical surfaces. The ratios of the components are controlled to give a product with excellent adhesion; non-sagging, rapid strength gain with shrinkage compensating properties and the addition of Corrosion Inhibitors reduces the likelihood of corrosion of embedded reinforcing steel.



USES

- Vertical and overhead surfaces
- Balconies and columns
- Parking structures, Bridges, Retaining walls and other general stalled areas
- Deteriorated or un-even precast or cast in place and steel reinforced concrete.
- In surfaces requiring Class C1 Exposure Classification (CSA A23.1/A23.2) including bridge decks, parking decks and ramps, portions of marine structures located within the tidal and splash zones, concrete exposed to seawater spray, and salt water pools.
- Below grade or Immersion service.

ADVANTAGES

The major advantages of this product include:

- **One component – easy mixing and handling**
- **Integral Corrosion Inhibitor reduces the likelihood of corrosion in host reinforcing steel.**
- High early strength
- Very low permeability to resist moisture and chloride intrusion.

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- Excellent bond to properly prepared substrates.
- Shrinkage compensated and shrinkage is low when appropriate water content is added.
- Color that matches existing concrete

PROCEDURES

Surface Preparation:

1. The repair area must be free of dirt, dust, laitance, efflorescence, oil, grease or any bond inhibit material. **DO NOT Acid Etch.** It is ideal to use high-pressure water blast, scabbler, or other appropriate mechanical means to obtain an exposed aggregate surface with minimum surface profile of 1.5 mm (1/16 in). **Proper surface preparation is essential.** Make sure repair area is not less than 3 mm (1/8 in) in depth.
2. Saturate the substrate surface thoroughly with clean water ensuring the host concrete is brought to Saturated Surface Dry (SSD) condition; with no standing water prior to or during application of Target V/O Structural Repair Mortar. If the ambient temperatures are anticipated to be above 20 °C (68 °F) then presoak the host substrate for two hours prior, to ensure SSD conditions.
3. Reinforcement steel should be thoroughly prepared by mechanical cleaning to remove all trace of rust or other bond-inhibiting materials such as rest, dirt, loose chips, and dust. Corroded steel should be high pressure washed with clean water after mechanical cleaning.

Mixing

A slow speed mechanical drill and rectangular thin set paddle (400-600 rpm) are recommended for mixing. Add 3.5 – 3.8 L of clean water for 25kg (55 lb) bag. Pour approximately 40% of water into mixing container, and then charge with half a bag TARGET V/O repair mortar. Add enough water to create a thick, “pudding type” consistency of the mix. Mix up to 3 minutes to uniform consistency. Do not mix longer than 5 minutes. Because of the rapid setting nature of this product mixing only half of the bag at a time is recommended.

Application

Remove excess water from the saturated surface of dry substrate. A scrub coat of TARGET V/O repair mortar can be applied as bonding coat prior to

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placement of the mortar. Place TARGET V/O repair mortar before bonding coat dried. TARGET V/O repair mortar should be scrubbed onto the substrate to fill voids. Press material against the edge of repair. When applied in multiple lifts, leave first lift in a roughened state prior to applying second lift. Allow preceding lift to final set before applying fresh material. If the next lift is not to be immediately placed, keep the surface continually moist. The thickness of each lift should not be less than 3 mm (1/8 in) or more than 11.43 cm (4.5 in) per lift.

Curing and Temperature

Proper curing is extremely important. Although moist curing of TARGET V/O repair mortar is not desirable, the product should be protected against any sources of premature drying during installation and for the first 24 hours after installation is complete. A relative humidity of 50% to 70% is ideal for curing. Mixture and air temperature should be 3 °C to 25 °C during the application of TARGET V/O repair mortar. Protect mortar from freezing for at least 72 hours after placing. Give mortar extra time to acquire published strengths when curing in temperatures below 10 °C.

TYPICAL PROPERTIES OF TARGET V/O REPAIR MORTAR MIX

WATER REQUIREMENT	3.5 – 3.8 liters/25 kg bag
28 DAY SHRINKAGE at 23 °C ±2 °C, 50% R.H.	<0.040 %
WORKING TIME at 20 °C (68 °F)	15-20 minutes
COMPRESSIVE STRENGTH CAN3-A23.2-1B	1 day - 2400 psi (16.5 Mpa) 7 days - 3500 psi (24.1 Mpa) 28 days - 5000 psi (34.5 Mpa)
SETTING TIME (ASTM C266) at 20 °C	Initial set - 30 min Final set - 1h 20 min
BOND STRENGTH (CAN A23.2-6)	1 day - >1.4 Mpa

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CAUTION

- Minimum 3 mm (1/8 in), and maximum per lift 11.43 cm (4.5 in).
- Mixing and curing temperature should be at a minimum at 3 °C (37 °F) and rising.
- With temperatures approaching or exceeding 25 °C (77 °F) utilize cold mix water to delay set times and allow for longer working time.
- Do not use solvent-based curing compounds.
- Mix only as much material as can be placed and finished within 15-20 minutes after the addition of mixing water.
- **Do not add more than recommended water.** Excess water will result in longer set times, reduced compressive strengths, segregation and excessive shrinkage.
- When working with TARGET V/O repair mortar, follow the standard safety precautions for Portland cement products. Normal safety-wear such as eye protection, rubber gloves and dust mask should be used. A Material Safety Data Sheet is available on request.

CHARACTERISTICS

COLOUR - Uniform Gray (Will lighten as material cures)

SHELF LIFE - 1 (one) year from date of manufacture when stored in a dry, protected and heated environment. (Production date and batching number stamped on side of each bag.)

HEALTH AND SAFETY - Please consult Target Products Ltd. Material Safety Data Sheets for personal exposure risks and safe handling procedures.

YIELD

- For trowel applications, each 25 kg (55 lb) bag of material will give approximately 13.9 L (0.49 ft³)

PACKAGING

TARGET V/O repair mortar is supplied in 25 kg (55 lb) bag 56 bags per pallet.

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