

Deco Crete

Dry Mix Shotcrete

DESCRIPTION:

DecoCrete is a pre-blended, pre-packaged; dry-process shotcrete material containing high early Portland cement, silica fume, air-entraining admixture, blended aggregates and other carefully selected components. DecoCrete has greatly enhanced shooting characteristics and physical properties.

USES:

- Rehabilitation of concrete bridges, dams, reservoirs, subway tunnels, marine structures and parking ramps.
- Lining and rehabilitation of sewers and water mains.
- New construction including slope stabilization, soil-nailing, shaft and tunnel linings, pools and other concrete structures.
- DecoCrete may be used in combination with steel fiber reinforcement to enhance load carrying capacity

ADVANTAGES:

- Sagging and sloughing are eliminated
- Improved early age strength development.
- Superior resistance to freeze-thaw cycling and salt-scaling resistance.
- Improved adhesive and cohesive plastic properties.
- Significantly reduced rebound, resulting in lower material usage.
- Improved ability to build greater thicknesses in a single pass in both vertical and overhead orientations.
- Improved resistance to water washout.
- Improved resistance to sulphate attack.
- Very low permeability.
- Low shrinkage.

APPLICATION:

Preparation:

All surfaces to be in contact with DecoCrete must be free from dust, oil, grease or any other foreign substances that may interfere with the bond of the material. Remove all loose or delaminated concrete providing a roughened surface and a minimum of 25 mm clearance behind any reinforcing steel. The perimeter of the repair area should be sawcut a minimum of 20 mm. Clean the area to be repaired with potable water, leaving the concrete saturated but free of standing water

Application:

Apply DecoCrete in accordance with the ACI 506 "Guide to Shotcrete" publication.

Although DecoCrete products are designed to reduce rebound, some rebound is to be expected. Do not incorporate rebound material back into the applied shotcrete.

Once DecoCrete is applied, a variety of finishing techniques can be used to achieve the desired surface texture. Some applications may require a finish coat. When combining water with the shotcrete mixture, use clean, potable water.

Curing:

DecoCrete should be cured in accordance with ACI 308 "Guide to Curing Concrete" to minimize plastic shrinkage.

SIZES AND EQUIPMENT:

DecoCrete products are available in (30 kg) packages for easy hand loading

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TECHNICAL DATA:

Compressive strength ASTM C 1604	≥ 20 MPa @ 1 day ≥ 40 MPa @ 7 days ≥ 55 MPa @ 28 days
Flexural strength ASTM C 78	≥ 8 MPa @ 7 days ≥ 11 MPa @ 28 days
Setting time ASTM C1398	Initial 1 hr Final 3 hr
Bond strength (Pull off) ASTM D4541-02	≥ 2.5 MPa
Fresh wet density	2.25 ± 0.1 g/cm ³
Drying shrinkage ASTM C490-00a	< 300 micron strain @ 7 days
Maximum aggregate size	3-6 mm
Applica on temperature range	5oC to 35oC
Fire rating EN 13505-1 Class A1	non-combustable
VOC ASTM D2369	< 10 g/ltr
AIR CONTENT ASTM C 457	6 ± 2%
MAXIMUM AIR VOID SPACING FACTOR ASTM C 457	300 µm
FREEZE-THAW RESISTANCE ASTM C 666	100%
SALT-SCALING RESISTANCE ASTM C 672	0.2 kg/m ²
UNIAXIAL DRYING SHRINKAGE ASTM C 157	800 µm/m
RAPID CHLORIDE PERMEABILITY ASTM C 1202	700 Coulombs

Limitations:

When applying DecoCrete products in adverse weather conditions follow ACI recommendations for hot and cold weather concrete construction. The performance of a shotcrete product is dependent not only on the material, but the equipment and jobsite personnel mixing and placing the shotcrete material. A nozzle man and crew that are properly trained in construction methods for applying shotcrete material are critical to the project's success.

SERVICES:

For further information on this product together with advice on application, please contact the Technical Advisory Department.

WARRANTY (DISCLAIMER):

Decorete® fully warrants their products when used and applied in strict accordance with the printed instructions on product mixing and product application. In any case Decorete®'s responsibility shall not exceed either the refund of the purchase

KEEP OUT OF REACH OF CHILDREN