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EUCOSHOT

SILICA FUME, MODIFIED SHOTCRETE

EUCOSHOT is a microsilica modified, one component, concrete repair material. This cement based, modified mortar is designed for use on vertical and overhead surfaces by dry shotcrete (gunite) application. EUCOSHOT is specially formulated for interior and exterior repairs to concrete and masonry structures.

PRIMARY APPLICATIONS

- Parking decks
- Bridge structures
- Pier and dock supports
- Marine environments
- Sewage treatment plants
- Dams
- Retaining walls
- Manholes
- Gunite projects
- Tunnels

FEATURES / BENEFITS

- One component material-ready to use with only the addition of water
- Helps protect rebar from corrosion
- Low chloride salt permeability
- Excellent freeze/thaw resistance
- Sulfate resistant
- Low shrinkage properties
- High abrasion resistance

PACKAGING / YIELD

EUCOSHOT is packaged in 50 lb (22.7 kg) moisture resistant bags. Yield will vary according to the amount of water added during the shotcreting operation. Approximate yield is 0.42 ft^3 (0.012 m^3) per bag when mixed with 3 quarts (2.8 liter) of water.

TECHNICAL INFORMATION

Typical Engineering Data

Typical engineering data under laboratory conditions, actual field results will vary.

Compressive Strength
ASTM C-109 2" (50 mm) Cubes

1 day	3,500 psi (24 MPa)
3 days	5,000 psi (34 MPa)
7 days	7,000 psi (48 MPa)
28 days	9,500 psi (65 MPa)

Flexural Strength ASTM C-348 (modified)

1 day	550 psi (3.8 MPa)
7 days	775 psi (5.3 MPa)
28 days	1,100 psi (7.6 MPa)

Shear Bond Strength ASTM C-882 (modified)

3 days	2,000 psi (14 MPa)
7 days	2,500 psi (17 MPa)
14 days	2,800 psi (19 MPa)
28 days	3,000 psi (21 MPa)

Direct Tensile Bond, (Germann Test)

14 days	350 psi (2.4 MPa)
28 days	425 psi (2.9 MPa)

Length Change ASTM C-157, 50% R.H.

2 days	-0.003%
7 days	-0.003%
14 days	-0.007%
21 days	-0.025%
28 days	-0.033%

Rapid Chloride Permeability, ASTM C-1202

7 days	4,000 coulombs
14 days	1,600 coulombs
21 days	975 coulombs
28 days	575 coulombs

Freeze/Thaw Resistance
ASTM C-666 Procedure A

300 cycles	>98% RDM

Scaling Resistance, ASTM C-672

10 cycles	0
20 cycles	0
30 cycles	0
50 cycles	0

Appearance-EUCOSHOT is a free flowing powder as packaged. After application, the color may initially appear darker than the surrounding concrete. While this color will lighten up substantially as the EUCOSHOT cures and dries out, the repair may appear somewhat darker than the surrounding concrete.

The final finish appearance can be any texture consistent with that expected from concrete and should typically match the surrounding concrete.

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 1/8" (3 mm) and expose the coarse aggregate of the concrete. The final step in cleaning should be the complete removal of all residue by pressure washing.

Exposed Reinforcement Steel-Exposed rebar may be treated with an anti-corrosion coating such as CORR-BOND or EUCO #452 LV epoxy. Remove all loose rust and scaling, preferably by sandblasting to white metal prior to coating the rebar.

Bonding-No bond coat is required for this product, but CORR-BOND may be used as a bonding agent. CORR-BOND should be allowed to set for 8 hours before EUCOSHOT application.

Mixing-Dry Shotcrete/Gunite:

Application-Set up dry process equipment in an area convenient to the placement site. Add EUCOSHOT powder directly to the gun. If dusting is objectionable, material may be pre-dampened prior to adding to gun. Gauge water at the nozzle and adjust to the desired consistency. **Note**:Wet process shotcrete may also be used but control of mix consistency will be more difficult.

Placing-Dry Shotcrete/Gunite:

Application-In general EUCOSHOT should be applied in accordance with the recommendations of ACI 506R-90, "Guide to Shotcrete". Pay special attention to the angle of the application (i.e. 90^{O}) and distance from the site of repair, normally 2 ft (0.6 m) to 6 ft (1.8 m). Typical application depths range from 1/2" to 6" (12 to 150 mm). If placement at a depth greater than 6" (150 mm)is required, cross hatch the surface of the initial layer. After the surface has sufficiently hardened additional layers may be placed.

Finishing-Excess material should be removed with a sharp edged tool or screed. Finish the repair material to the desired texture to match the surrounding concrete. Do not add additional water to the surface during the finishing operation. If additional liquid is required, use EUCOBAR finishing aid.

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 SUPER AQUA-CURE VOX or SUPER REZ-SEAL. In hot, windy or direct sunlight situations, apply a second coat of curing compound after the initial coat is dry.

If a curing compound is not desired, cover with polyethylene sheeting for a minimum of three days.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

Shelf life is 2 years in original, unopened package.

PRECAUTIONS / LIMITATIONS

- Do not allow repairs to freeze until the material has reached a minimum of 1000 psi (7 MPa) compressive strength.
- In adverse temperatures, follow ACI recommendations for hot/cold weather concreting practices.
- Use only potable water at the nozzle.
- Minimum application thickness is 1/2" (13 mm).
- Minimum surface and ambient temperatures are 45^{O}F (7^{O}C) and rising at the time of application.
- For optimum results, condition material to 65-85^{O}F (18-29^{O}C).
- Store product in a dry place.

Form Eucoshot-6.97