



THE EUCLID CHEMICAL COMPANY

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EUCOSHOT F



SILICA FUME, MODIFIED SHOTCRETE WITH FIBERS

EUCOSHOT F is a microsilica modified, one component, shotcrete material that incorporates a 3/4" (19mm) polypropylene reinforcing fiber. This cement based, modified mortar is designed for use on vertical and overhead surfaces by dry shotcrete (guniting) application. EUCOSHOT F is specially formulated for interior or exterior uses.

PRIMARY APPLICATIONS

- Guniting projects
- Utility structures
- Tunnels
- Mining applications

FEATURES/BENEFITS

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

PACKAGING/YIELD

EUCOSHOT F is packaged in 50 lb (22.7 kg) moisture resistant bags and is also available in 3,300 lb (1,500 kg) sacks. Yield will vary according to the amount of water added during the shotcreting operation. Approximate yield is 0.42 ft³ (0.012 m³) per 50 lbs bag when mixed with 3 quarts (2.8 liter) of water.

Shelf Life: 1 year in original, unopened package.

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 F is a free flowing powder as packaged. The final finish appearance can be any texture consistent with that expected from sprayed concrete.

DIRECTIONS FOR USE

Mixing-Dry Shotcrete/Gunite:

Application-Set up dry process equipment in an area convenient to the placement site. Add EUCOSHOT F 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 F 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°) and distance from the substrate, 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.

PRECAUTIONS/LIMITATIONS

- Do not allow applied shotcrete 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°F (7°C) and rising at the time of application.
- For optimum results, condition material to 65-85°F (18-29°C).
- Store product in a dry place.

ADDITIONAL INFORMATION

For more information on the use of EUCOSHOT F or any other Euclid Chemical product, contact The Euclid Chemical Company, Underground Sales and Marketing at 1-800-321-7628, extension 8395. The Euclid Chemical Company will assist mining and tunneling operations in testing of materials to assess correct product usage for specific applications.



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