



# EUCOSHOT V

## WATER REPELLENT, SILICA FUME MODIFIED SHOTCRETE WITH MICRO FIBERS

### PACKAGING

50 lb (22.7 kg) bag

Code: 105V 50

2,200 lb (1,000 kg) spout-bottom bag

Code: 105V 30

3,300 lb (1,500 kg) bulk bag

Code: 105V 99

### APPROXIMATE YIELD

**50 lb (22.7 kg) unit:** 0.42 ft<sup>3</sup> (0.012 m<sup>3</sup>)  
per unit when mixed with 2 to 2.4 qt  
(1.9 to 2.3 L) of potable water. Yield  
will vary according to the amount of  
water added during the shotcreting  
operation.

### MINIMUM/MAXIMUM APPLICATION THICKNESS

Typically 1/2 to 6 inches (1.2 to 15 cm)  
per lift

### CLEAN UP

Clean tools and equipment with water  
before the material hardens.

### SHELF LIFE

1 year in original, unopened package

### DESCRIPTION

EUCOSHOT V is a microsilica modified, one component, shotcrete material that incorporates a 1/2" (13 mm) polypropylene micro-fiber and a crystalline water repellent component. This cement based, modified mortar is designed for use on vertical and overhead surfaces by dry shotcrete (gunite) application or by mixing with water and applying as a wet-mix shotcrete. EUCOSHOT V is specially formulated for interior or exterior uses.

### PRODUCT CHARACTERISTICS

#### 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
- Can also be trowel or hand applied

#### PRIMARY APPLICATIONS

- Gunite projects
- Utility structures
- Tunnels
- Mining applications
- Architectural applications
- Interior or exterior
- Ground support
- Aesthetic applications

#### APPEARANCE

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

TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Test Method	Test Property	Values
ASTM C109 2" (50 mm) cubes	Compressive Strength	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)
ASTM C348M	Flexural Strength	1 day . . . . . 550 psi (3.8 MPa) 7 days . . . . . 775 psi (5.3 MPa) 28 days . . . . . 1,100 psi (7.6 MPa)
ASTM C882M	Shear Bond Strength	3 days . . . . . 1,800 psi (12 MPa) 7 days . . . . . 1,900 psi (13 MPa) 28 days . . . . . 2,000 psi (14 MPa)
ASTM C157 50% RH	Length Change	3 days . . . . . - 0.023% 7 days . . . . . - 0.042% 28 days . . . . . - 0.056% 56 days . . . . . - 0.062%
CRD C48-92	Water Permeability of Concrete	Test Duration: 14 days Water Pressure: 200 psi (462 ft of head pressure, 13.8 bar) Flow: 0.20 cm3/hr Water Permeability (K): 10.9 x 10 <sup>-12</sup> (ft <sup>3</sup> /sec)/[ft <sup>2</sup> /(ft head/ft)]

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## 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 to achieve a surface profile similar to CSP 7 or greater in accordance with ICRI Guideline 310.2 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:** Remove all loose rust and scaling, preferably by sandblasting to white metal prior to application.

**Bonding:** No bond coat should be used for this product, but the substrate must be saturated-surface dry (SSD) prior to application.

**Dry Shotcrete/Gunite:** Set up dry process equipment in an area convenient to the placement site. Add EUCOSHOT V 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.

**Placing Dry Shotcrete/Gunite:** In general EUCOSHOT V should be applied in accordance with the recommendations of ACI 506R "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.

**Mixing Wet Shotcrete:** Add EUCOSHOT V to water in the mixer drum (35 gallons [130 L] of water per 3,300 lb [1,500 kg] bulk bag of EUCOSHOT V), mix for 2 minutes and add remaining water (up to 5 gal [20 L]). EUCON 37 can be used to reduce the amount of water required.

**Placing-Wet Shotcrete:** In general EUCOSHOT V should be applied in accordance with the recommendations of ACI 506R "Guide to Shotcrete"

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## PRECAUTIONS/LIMITATIONS

- Do not allow applied shotcrete to freeze until the material has reached a minimum of 500 psi (3.5 MPa) compressive strength.
- When necessary, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Use only potable water at the nozzle.
- Minimum application thickness is 1/2" (13 mm).
- Minimum surface and ambient temperatures are 40 °F (5 °C) and rising at the time of application.
- For optimum results, condition material to 65 to 85 °F (18 to 29 °C).
- Store product in a dry place.
- In all cases, consult the Safety Data Sheet before use.

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