

PRODUCTNAME

# Thermo-Shield®FC (Flexible) Exterior Insulation & Finish System



MANUFACTURER

Gemite® Products Inc.

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FEATURES

- 3-dimensional surface relief
- Mechanically or adhesively attached
- Breathable (good Water Vapor Transmission)
- Sprayable
- Energy efficient (cost saver)
- Easy to apply
- Various textures and colors

PRODUCT DESCRIPTION

Basic Use

Thermo-Shield FC is an EIF System suitable for application over wood and metal frame, masonry and concrete. The system is suitable for retrofit and new construction. Thermo-Shield FC system also lends itself to panelization, allowing year-round construction.

Composition and Materials

Thermo-Shield FC consists of mechanically or adhesively fastened thermal insulation board, reinforced base coat and the textured color finish.

Insulation

Expanded polystyrene insulation or mineral wool insulation can be used.

Fasteners & Accessories

Fasteners, washers, plaster stops, corner beads, control joints and other accessories must be used as per Specification.

Base Coat

Thermo-Shield FC Premix is a cement based, flexible, one component coating, mix with water only.

Thermo-Shield FC Adhesive Concentrate, an acrylic liquid additive mixed with Portland cement only.

Thermo-Shield FC Premix and Adhesive can both be used as an adhesive and as a Base Coat. For panel fabrication use Thermo-Shield FC Adhesive only.

Reinforcing Fabric

Reinforcing Fabric FC, 96.5 cm x 45.7 m (38" x 150 ft) roll, is an open weave fabric used for reinforcement of the base coat.

Edge Detail Fabric FC, 24.1 cm x 45.7 m (9.5" x 150 ft) roll, open weave fabric used for wrapping edges of the insulation board at perimeters and in surface relief detailing.

Reinforcing Fabric HI (High Impact), 96.5 cm x 22.9 m (38" x 75 ft) roll, heavy duty fabric used in addition to Reinforcing Fabric FC when a high impact protection is required.

Primer

Primer #300 is an acrylic latex primer for the Base Coat, prior to the application of the finishing coat.

Finishing Coat

Tuff-Cote is an 100% acrylic and integrally colored flexible, textured coating, available in a variety of finishes and colors.

Tuff-Stone CB is an 100% acrylic coating using colored aggregates to achieve a desired color.

Sealant

One component silicone sealant.

Air and Vapor Barriers

Air and Vapor barriers are mandatory in new construction and may be necessary in retrofit.

Limitations

Must be installed at temperatures 4°C (40°F) or above. The temperature must remain for a minimum of 24 hours after installation. Take precautions when applying under tarp or at temperatures above 25°C (77°F).

Health and Safety

Thermo-Shield FC is non-toxic and non-flammable. Your skin might be sensitive to cement. We recommend use of rubber gloves. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water. Seek medical advice if irritation occurs. Harmful if digested. Keep product out of reach of children. FOR INDUSTRIAL USE ONLY. Consult MSDS for additional information.

Packaging

Thermo-Shield FC Premix is packaged in 22.7 kg (50 lb) bags. Thermo-Shield FC Adhesive Concentrate is packaged in 19.8 L (5.2 USG) pails.

Yield

One bag of Thermo-Shield FC Premix mixed with 4 L (1.1 USG) of water yields 12.5 L (0.44 ft³) and covers 7.8 m² @ 1.6 mm (84.4 ft² @ 1/16") thickness.

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07240 Exterior Insulation and Finish Systems  
07420 Composite Building Panels

One pail of *Thermo-Shield FC Adhesive Concentrate* mixed with 28 kg (62 lb) of cement yields 28.7 L (1.01 ft<sup>3</sup>) and covers 18 m<sup>2</sup> @ 1.6 mm (193.2 ft<sup>2</sup> @ 1/16") thickness per unit mix.

The coverage's are only given as guide line and depend greatly on thickness of the application and application method used. Carry out field application to determine the exact material quantity requirements.

**Storage and Transportation**

*Thermo-Shield FC Premix* and *Adhesive*, when stored on pallets in a dry environment, have a shelf-life of 12 months. *FC Adhesive must not freeze.* Pack aged 55 bags (*Premix*) and 36 pails (*Adhesive*) per pallet.

**TECHNICAL DATA - Base Coat**

Modulus of Rupture (ASTM C27-40)	12.4 - 13.8 MPa (1,800 - 2,000 psi)
Compressive Strength (ASTM C109 Mod.)	7.6 - 31.0 MPa (4,000 - 4,500 psi)
Tensile Strength (GPD T-245)	7.6 - 8.3 MPa (1,100 - 1,200 psi)
Freeze/Thaw Durability (ASTM C 666 A)	0% Weight Loss
Water Vapor Permeability (ASTM C355-64)	11.2 - 20.0 perm-cm (6.8 - 12.0 perm-in)

**INSTALLATION**

Current Guide Specification and Application Instructions contain additional information specific to each application and must be followed. Contact Gemite's Technical Service for information specific to your application and to carry out the computer analysis to optimize the wall performance.

Mix Design	Metric	US
<i>Thermo-Shield FC Premix</i>	22.7 kg	50 lb
Water	4.0 L	1.1 USG
<i>Thermo-Shield FC Adhesive</i>	19.8 L	5.2 USG
Cement	28 kg	62 lb

**Mixing**

Use heavy duty drill (400 - 600 RPM) with a mixing paddle.

*Premix* - place water into a pail and gradually add the *Thermo-Shield FC Premix* while mixing until a creamy, plastic consistency, lump free mix is obtained.

*Adhesive* - place *Thermo-Shield FC Adhesive* into a pail and gradually add Portland Cement while mixing until a creamy, plastic consistency, lump free mix is obtained.

**Application**

Back wrap the insulation board terminations using *Edge Detail Fabric FC*. Apply *Premix/Adhesive* to the insulation in specified pattern. Install the insulation board on wall and allow the *Base/Adhesive* to cure. Seal with fasteners as specified.

Rasp the surface of the insulation to make the surface straight and level. Apply the base coat with trowel over the entire surface of the insulation board and embed *Reinforcing Fabric FC* in wet base. Overlap the joints of the reinforcing fabric. Add the base to cover the fabric completely and let cure. The minimum thickness of the *FC* base coat must be 1.6 mm (1/16 in).

Roll or spray apply the *Primer #300* and apply *Tuff-Cote* or *Tuff-Stone CB* by trowel, spray or roller to provide desired texture and color.

**Curing**

*Thermo-Shield FC* Base Coat must cure for a minimum of 3 days before application of the Primer and Finishing Coating. When working under tarps at freezing temperatures, use electrical heaters. Avoid using propane heaters to prevent "carbonation" of the material.

**Clean Up**

All tools must be cleaned with water immediately after use. Cured material can only be removed mechanically.

**AVAILABILITY AND COST**

Available worldwide. Contact Gemite for the name of the nearest Representative/Distributor and pricing information.

**MAINTENANCE**

*Thermo-Shield FC* is virtually maintenance free and requires repair only when damaged by intentional or severe abuse.

**WARRANTY**

A limited twelve (12) month Material Replacement Warranty is available. For complete details contact Gemite's Head Office.

**TECHNICAL SERVICE**

For advice on suitability of *Thermo-Shield FC* for a specific application, specification assistance and application advice contact Gemite's Technical Service at: USA 888-443-6483 or Canada 905-672-2020.

**Short Specification**

The exterior insulation and finish system shall be *Thermo-Shield FC* manufactured by Gemite Products Inc. [USA 888-443-6483][Canada 905-672-2020]. The insulation shall be expanded polystyrene or mineral wool approved by Gemite Products Inc. The insulation shall be adhesively bonded or mechanically attached by fasteners. *Thermo-Shield FC* Base Coat shall be applied at a minimum thickness of 1.6 mm (1/16"). The system shall be finished with *Tuff-Cote* to a specified texture and color. It shall be applied by an Authorized Applicator according to current Gemite Products Inc. Guide Specifications and Application Instructions. All components of the System must be supplied by Gemite Products Inc. to be eligible for warranty.