

PRODUCTNAME

Gem-Plast® FR

(Fibre-Reinforced)
Crack Resistant Waterproof Plaster



The Advanced Materials Centre

MANUFACTURER

Gemite® Products Inc.

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FEATURES

- Thin layer, 10 mm (3/8 in)
- Crack resistant and flexible
- No drying shrinkage cracking
- Excellent workability and ease of application
- Waterproof and Breathable
- Sprayable
- Long working time, no retempering required
- UV and freeze/thaw resistant
- Non-combustible & non-toxic
- Economical

PRODUCTDESCRIPTION

Basic Use

Gem-Plast FR is formulated for crack-free plaster application over expanded metal lath and is suitable for wood and steel stud construction. Gem-Plast FR can also be used as a thin rainscreen cladding for restoration of leaking masonry walls.

Composition and Materials

Gem-Plast FR is a Portland cement based, glass-fibre reinforced plaster, supplied as a Premix or a Concentrate.

Limitations

Do not apply Gem-Plast FR when the temperature is expected to be below 4°C (40°F) within 48 hours or when the rain is imminent. Minimum thickness 10 mm (3/8 in). Protect from accelerated drying.

Health and Safety

Gem-Plast FR 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.

Color

Dark Grey.

Packaging

Gem-Plast FR Concentrate is packaged in 10 kg (22 lb) bags. Gem-Plast FR Premix is packaged in 22.7 kg (50 lb) bags.

Yield

Gem-Plast FR Concentrate, when mixed with the specified amounts of cement, sand and water, yields 84.6 L (3.2 ft³) and covers approximately 9.4 m² @ 9 mm (102.2 ft² @ 3/8") thickness per bag. Gem-Plast FR Premix, yields 12.2 L (0.43 ft³) and covers approximately 1.35 m² @ 9 mm (13.8 ft² @ 3/8") thickness per bag.

Storage and Transportation

Gem-Plast FR stored on pallets in a dry, cool area has a shelf life of 12 months. Packaged 60 bags (Concentrate) or 55 bags (Premix) per pallet.

TECHNICAL DATA

Compressive Strength (ASTM C109)	20.7 - 24.1 MPa (3000 - 3500 psi)
Modulus of Rupture (ASTM C348)	4.1 - 5.5 MPa (600 - 800 psi)
Izod Impact Strength	7 - 18 GJ/m ² (35 - 90 in-lb/in ²)
Freeze/Thaw Resistance (ASTM C666 Procedure A)	Less than 1% weight loss after 300 freeze/thaw cycles
Combustibility (ULC 114)	passes
Drying Shrinkage (ASTM C596)	0.10 - 0.12%

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.

Surface Preparation

The expanded metal lath, control joints, plaster stops and flashings must be fastened onto the wall as semibly according to the plans and specifications.

Mix Design	Metric	US
Gem-Plast FR Concentrate	10 kg	22 lb
Cement	40 kg	94 lb
Sand	120 kg	283 lb
Water	22 L	6.2 USG
Gem-Plast FR Premix	22.7 kg	50 lb
Water	3.8 L	1.0 USG

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9 & 4

03120 Portland Cement Plaster
04520 Masonry Restoration

Mixing

Use a paddle or helix screw type mortar mixer. Place mixing water in the mixer. Remove separately packed bag of fibres from the bag of *Gem-Plast FR Concentrate*. Add the powder into the water and mix for one (1) minute. Add sand and cement and mix until free of lumps. Add reinforcing fibres gradually and mix for not more than one (1) minute. Adjust mortar for the desired consistency. Convey mixed material to point of placement in clean uncontaminated containers. Can be pumped and sprayed.

Application

Trowel apply the "scratch" coat of *Gem-Plast FR* at a uniform thickness of 6 mm (1/4 in). Leave the surface rough. Double up the same or follow with 3 mm (1/8 in) layer, straight edge and float. *Gem-Plast FR* can also be spray applied using *Spray-Con 125 Pump*.

Curing

Protect the finished surface from accelerated drying. Air dry cure *Gem-Plast FR* for a minimum of three days before application of acrylic finishing coatings, such as *Tuff-Cote*.

Clean Up

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

AVAILABILITY AND COST

Gem-Plast FR is available world wide. Contact Gemite for the name of the nearest Representative/Distributor and pricing information.

MAINTENANCE

None required.

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 *Gem-Plast FR* for specific application, specification assistance and application instructions, contact Gemite Technical Service: USA 888-443-6483 or Canada 905-672-2020.

Short Specification

The plaster will be *Gem-Plast FR*, crack resistant glass-fibre reinforced plaster, manufactured by Gemite Products Inc., [USA 888-443-6483] [Canada 905-672-2020]. It will be mixed and applied by an Authorized Applicator in accordance with Gemite's current Specifications and Applications Instructions. It will meet all the Technical Data specified in the current *Gem-Plast FR* Product Data Sheet.