



## Gem-Crete<sup>®</sup> TWM Plus Traffic Waterproofing Membrane

### FEATURES

- Flexibility
- Long term crack resistance
- Freeze/thaw resistant
- Excellent abrasion resistance
- Highly breathable
- Totally insensitive to substrate moisture
- Excellent salt scaling resistance
- Self-curing
- Continuous water immersion possible
- Superior negative/positive waterproofing
- Salt resistant
- Non toxic
- Easy mixing, application and sprayable

### DESCRIPTION

#### Basic Use

**Gem-Crete TWM PLUS** is designed for waterproofing of light to medium traffic surfaces, including parking garages in new construction and restoration. It is also suitable for waste water tanks, secondary containment structures, tunnels, concrete slabs, balconies and patios. **Gem-Crete TWM PLUS** is breathable and is totally insensitive to substrate moisture, unlike polyurethane and epoxy membranes. It can be applied to completely water saturated concrete slab.

#### Composition and Materials

**Gem-Crete TWM PLUS** is a two component, flexible, breathable, cementitious liquid applied membrane.

#### Limitations

Do not apply **Gem-Crete TWM PLUS** when the temperature is expected to be below 4°C (40°F) within 48 hours, or when rain is imminent. Follow Hot Weather concreting precautions when applying **Gem-Crete TWM PLUS** at temperatures exceeding 25°C (77°F) or under sunny and windy conditions.

#### Health and Safety

**Gem-Crete TWM PLUS** is non-toxic. Your skin might be sensitive to hydraulic cement, or the liquid additive. 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.

#### Colour

**Gem-Crete TWM PLUS** is available in Industrial Grey and Light Grey colours. It can be coated with **Gem-Coat WA ST** to provide other colours. When **Gem-Crete TWM PLUS** Light Grey is used, we recommend application of a clear acrylic sealer **Gem-Seal WA ST** for cleanability.

#### Packaging

**Gem-Crete TWM PLUS Kit** consists of a dry Component A, packed in 22.7 kg (50 lb.) bags. The liquid Component B of Industrial Grey, 7.20 L (1.92 U.S. gal.) and 6.92 L (1.81 U.S. gal.) of Light Grey, are packaged in plastic jugs.

#### Yield

**Gem-Crete TWM PLUS** kit, Industrial Grey, yields 15.4 litres (0.54 ft<sup>3</sup>) and covers approximately 9.6 m<sup>2</sup> @ minimum thickness of 1.6 mm (104 ft.<sup>2</sup> @ 60 mils) per kit, applied in two (2) coats – each coat approximately 0.8 mm (30 mils). The coverage of Light Grey material is 3% less when compared with the Industrial Grey. The actual coverage will depend on surface roughness, porosity and the thickness applied. The applicator must carry out a sample application to determine the actual coverage for the given substrate and application thickness.

#### Storage and Transportation

**Gem-Crete TWM PLUS** when stored on pallets in a dry, cool area, free from moisture and direct sunlight, has a shelf life of 12 months. The liquid Component B must not freeze. Packaged 40 kits per pallet.

### TECHNICAL DATA

Flexibility (ASTM D522 Mod.) at 20°C, non-reinforced	20%
Crack Spanning (Gemite ISO TP005) @ 20°C, reinforced with NW Fabric	1.0 mm (40 mils)
Water Vapour Permeability, Engelfried-Klopfer S <sub>d</sub> <3 m	S <sub>d</sub> = 0.140 m
Salt Scaling Resistance, (ASTM C672)	Excellent
Hydraulic Impermeability TTP 1411 (negative side), 2 mm thickness	Water head >38.4 m (>126 ft)
Abrasion Resistance Taber Abrador, ASTM D 4060 Mass 1000 g	0.4 g per 1000 rotations
Chloride Salt Penetration Resistance Gemite Test Procedure	No chloride penetration

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## INSTALLATION

Current Guide Specification and Application Instructions contain additional information specific to each application and must be followed. The applicator must, prior to bid, confirm the detailing, use of the *Reinforcing Fabric NW*, surface preparation, crack treatment and application procedures with Technical Service.

### *Surface Preparation*

Remove all deteriorated and loose concrete, form release agents, oil, grease, laitance, dust, dirt and efflorescence by dry or wet sandblast, shotblast, or high pressure water (minimum 34.5 Mpa – 5,000 psi). In new balcony construction use industrial floor scrubbers to remove the surface laitance. Repair deeper areas using **Gem-Plast Flex ST** or **MEADOW-CRETE® OV**. Pre-fill all cracks with **Cem-Kote Flex Plus**. The proper surface preparation is essential for a successful waterproofing and concrete repair using **Gem-Crete TWM PLUS**. Contact Technical Service for detailed surface preparation instructions.

### *Mixing*

Thoroughly mix (by shaking) the liquid Component B prior to its use. Use standard paddle or helix screw type mortar mix, or heavy duty drill (400 – 600 rpm) with a mixing paddle. Pour approximately 80% of the liquid Component B into a clean mixer and gradually add the dry Component A, while mixing, until a smooth and lump free mix is obtained. Lumps will form if the dry material is added suddenly into the liquid. Add the remaining liquid, while mixing, to achieve the consistency required for a given application. A small amount of water can be added, if required, at higher ambient temperatures.

### *Application*

Trowel or brush apply **Gem-Crete TWM PLUS** to a minimum thickness of 1.6 mm (1/16") in two (2) coats to a saturated surface dry (SSD) concrete. (The first coat 0.8 mm and the second also 0.8 mm thick). **Gem-Crete TWM PLUS** can also be spray applied using a **Gemite Peristaltic Pump** with a plastering spray nozzle. When using spraying, brush each coat to eliminate all "pinholes". The second coat must be applied into "wet" first coat, as soon as possible, usually within 10 – 15 minutes, depending on temperature and relative humidity. The delayed application of the second coat could result in its de-bonding.

### *Crack Treatment*

All moving cracks need to be treated using **Cem-Kote Flex Plus** and **Reinforcing Fabric NW**. Pre-fill any open cracks with **Cem-Kote Flex Plus**. Apply a thin coat of **Cem-Kote Flex Plus**, 15 cm (6") wide, over the crack. Embed a strip of the **Reinforcing Fabric NW**, 10 cm (4") wide, into the wet **Cem-Kote Flex Plus**. Let dry and apply a thin coat of **Cem-Kote Flex Plus** over the **Reinforcing Fabric NW**.

### *Reinforcing Fabric HD*

In some instances, where a very high abrasion resistance and toughness are required, e.g. ramps, apply the **Reinforcing Fabric HD** to reinforce the layer of **Gem-Crete TWM PLUS** membrane. Apply first a thin layer of **Gem-Crete TWM PLUS** by brushing, or spraying. When spraying, brush each coat to eliminate all "pinholes". Embed the **Reinforcing Fabric HD** into the first coat and follow with the second coat. The fabric must be fully covered and must not protrude through the surface. The minimum applied thickness of **Gem-Crete TWM PLUS**, including the **Reinforcing Fabric HD**, is 2.0 mm (80 mils).

### *Curing*

Cure **Gem-Crete TWM PLUS** by air drying for a minimum of 2 days prior to opening the membrane to traffic. Longer curing times are required in cold, wet and humid conditions. Contact Technical Service for more detailed information. Protect fresh applications from rain, strong wind and intense sunlight for 12 hours. When working under tarps at freezing temperatures, avoid using propane heaters. Only electrical heaters should be used to prevent "carbonation" of **Gem-Crete TWM PLUS**.

## MAINTENANCE

In case of localized high wear or damage, the membrane is simply and easily repaired.

## WARRANTY

A limited twelve (12) month Material Replacement Warranty is available. For details contact Technical Service.

## TECHNICAL SERVICE

For advice on suitability of **Gem-Crete TWM PLUS** for a specific application, specification assistance and application advice, contact Technical Service at 1-800-563-3618.

## MANUFACTURER

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### **LIMITED WARRANTY**

Gemite Products Inc. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

### **Disclaimer**

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