



TERA-GEM III

Conductive Flooring System (CFS)

PRODUCT DESCRIPTION

Tera-Gem III Conductive Flooring System (CFS) is a troweled tough wearing, chemical resistant, solvent free (No VOC's – Meets all of California's VOC Requirements), seamless epoxy - aggregate composite designed to reduce static generation and to dissipative static charges. This product has an excellent adhesion to concrete, tile and wood substrates. The Tera-Gem III CFS system is a nominal 1/8" or 1/4" thick composite consisting of the following:

PRIMER: A two component moisture tolerant epoxy resin and conductive materials.

BASE COAT: A three component, troweled polymer composite consisting of epoxy resin (with or without inorganic pigments), curing agent, conductive materials, and selected graded silica aggregates. If necessary, embedded in the base coat will be either copper ground straps, copper tape or conductive foil tape with conductive adhesive. Existing metal beams or structures may be used as grounding points. All grounding points must be tested for continuity.

TOPCOAT: Consists of the Tera-Gem III CRS, curing agent and conductive materials.

PHYSICAL PROPERTIES

Compressive Strength	(ASTM C-579)	8,600 psi. AFTER 7 DAYS
Flexural Strength	(ASTM C-580)	4,500 psi.
Tensile Strength	(ASTM C-307)	2,400 psi.
Flammability	(ASTM 635)	Self Extinguishing
Impact Resistance	(Mil D-3134F Sec 4.7.3)	No cracking or delamination at 16/ft./lbs.
Water Absorption	(ASTM C-413)	0.10%
Bond Strength, Primer	(ASTM 4541)	350 psi

Physical Properties-Binder Cured 7 days

Hardness	(ASTM 2240)	Shore D - 85
Abrasion Resistance	(ASTM 4060) CS10 Wheel	1000 cycles, wt. loss (gm) - .035 gm
Water Spot Resistance	72 deg. F. 8 hr. cure	Pass

Resistivity Properties	(ASTM F-150-89 at 500 volts DC)	
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Resistance to ground:	Point to Ground (Per ESD 7.1)	<1 Mega Ohms (2.5E4-1E6)
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Application Properties

Mix Ratio	2A : 1B by volume
Pot Life (minutes)	20-30 @ 77 deg. F

When placed by trained applicators, Tera-Gem III CFS will provide a long lasting, easy to maintain floor that will stand up even in the most demanding of environments.

NOTE ON CONDUCTIVE COATING

Because of the insulated properties of most foot wear, caster or equipment stand, electrostatic charges can be generated and accumulated on personnel and equipment. To minimize electrostatic generation and accumulation, a conductive flooring (CFS) must be used with controlled footwear and conductive wheels, casters and equipment stands. Unless all equipment, work practices or test instruments are properly designed, electrostatic dissipative flooring may be hazardous. Meeting the specifications of this product data sheet will not guarantee personnel safety.

SUGGESTED USES

Tera-Gem III CFS is suitable for electronic process areas, warehouse, electronic plants, clean rooms and hospital operating rooms.

CHEMICAL RESISTANCE (PARTIAL LIST)

<u>Reagent</u>	<u>Film Integrity</u>	<u>Reagent</u>	<u>Film Integrity</u>
30% Nitric Acid	No Effect	Urine	No Effect
30% Phosphoric Acid	No Effect	Household Cleaner	No Effect
20% Hydrochloric Acid	No Effect	(Non-Dye Containing)	
70% Sulfuric Acid	No Effect	Beer/Wine	No Effect
10% Acetic Acid	No Effect	Rubbing Alcohol	No Effect
50% Sodium Hydroxide	No Effect	Bleach	No Effect

NOTE:

- The end user should supply information regarding chemical concentrations, service temperatures and cleaning procedures to verify correct use of product. Review full chemical resistance charts for additional chemical information. Contact TL technical department for information regarding specific applications.
- Staining or a white blush will occur if the new floor is not allowed to cure fully (7 days) prior to allowing water, chemicals, etc. to stand on the surface.

SURFACE PREPARATION

Concrete surfaces must be free from surface contaminants, laitance, curing compounds, oils, greases, dirt, chemical contaminants, delaminated coatings, etc. The surface must be sound. Concrete compressive strength must be a minimum of 2,500 psi. New concrete should be cured for a minimum of 28 days, preferably by wet cure. User must notify manufacturer if conditions differ from above. If hydrostatic moisture test results are in excess of 10lbs. then a moisture vapor barrier coating will be required in order to warranty application against failure due to hydrostatic moisture. To properly prepare concrete surfaces, the concrete may be steel shot-blasted, ground, scarified, or prepared using another approved technique.

SYSTEM APPLICATION

PRIMER:

Use Tera-Gem III CFS liquid A & B components as primer. Use a clean bucket and mix 2 parts of A to 1 part of B by volume, and one weight equivalent of pre-measured conductive filler. Stir with a mechanical agitator for 2-3 minutes. Distribute mixed material evenly over the floor surface using rollers or squeegees. Apply to a thickness of 3 to 10 mils.

BASECOAT:

Using the same liquid resins as above along with the pre-measured conductive filler and select graded silica aggregates. Transfer to installation area and trowel to a thickness of 1/8" to 1/4".

TOPCOAT:

Use a clean bucket and mix 2 parts of A to 1 part of B by volume, and one weight equivalent of pre-measured conductive filler. Stir with a mechanical agitator for 2-3 minutes. Distribute mixed material evenly over the floor surface using rollers or squeegees. Apply to a thickness of 4 to 10 mils.

MATERIAL HANDLING

Epoxy resins and curing agents have certain handling hazards. Users should become familiar with the information contained in the SDS sheets for each formulated systems. Observe warning indications on the labels for each component.

PACKAGING

Tera-Gem III CFS epoxy system is available in pre-measured gallon, 3 gallon kits, 15 gallons kits and 165 gallon kits.

NOTES

- The following information is available online at www.teralite.com:
 - Material Safety Data
 - Color Selection
 - Anti-Skid Recommendation
 - Maintenance Suggestions
 - Chemical Resistance
- Tera-Gem III CFS is formulated to meet the static dissipative resistance range of 25,000 to 1 million ohms (2.5E4-1E6) resistance. For static dissipative ranges between 1 million to 1 billion ohms (1E6-1E9) please see the product data for Tera-Gem III Electrostatic Discharge Coating (ESD).

The technical data furnished is true and accurate to the best of our knowledge. However, no guarantee of accuracy is given or implied. We suggest that the user evaluate these recommendations and suggestions in conjunction with their specific application. Tera-Lite, Inc. / Revolan Systems warrant its products to be free from manufacturing defects conforming to our most recent material specifications. In the event of liability, we will be limited to the replacement of material at the material value only and at the sole discretion of Tera-Lite Inc. /Revolan Systems. We assume no responsibility for coverage, suitability of application, performance, or injuries resulting from use.

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