



## TERA-GEM III Conductive Flooring System (CFS)

### PRODUCT DESCRIPTION

Tera-Gem III Troweled Conductive Flooring System (CFS) is tough wearing, chemical resistance, solvent free epoxy based composite system designed to reduce static generation and to dissipative static charges. The CFS system provides excellent resistance to various industrial chemicals. Because of the select graded silica aggregates, greater impact strength and heavier load capability are obtained. This product has excellent adhesion to concrete, tile and wood substrates. The available colors are black and various shades of gray. Custom colors are available upon request. The Tera-Gem III CFS system is a nominal 1/8" or 1/4" thickness composite consisting of the following:

**CONDUCTIVE PRIMER:** A moisture tolerant epoxy resin, curing agent, conductive materials.

**CONDUCTIVE BASE COAT:** Consists of a chemical resistance epoxy, curing agent, conductive materials and select graded silica aggregates. (Aggregate modification can be made to adjust physical properties and workability). 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.

**CONDUCTIVE TOP COAT:** Consists of a chemical resistant epoxy, curing agent and conductive materials. For custom colors, conductive pigments are added to obtain the desired color.

### PHYSICAL PROPERTIES

Compressive Strength	(ASTM C-579)	8,600 psi. AFTER 7 DAYS
Flexural Strength	(ASTM C-580)	4,400 psi.
Tensile Strength	(ASTM C-307)	2,400 psi.
Hardness	(ASTM 2240)	Shore D - 85
Flammability	(ASTM D635)	Self Extinguishing
Water Absorption	(ASTM C-413)	0.10
Impact Resistance	(Mil-D-3134F Sec.4.7.3)	No cracking or delam at 16/ft/lbs
Abrasion Resistance	(ASTM 4060)	0.035
Bond Strength	(ASTM 4541)	350 psi
Water Spot Resistance at 72F, 8hr cure		Pass
Resistivity Properties	(ASTM F-150-89 at 500 volts DC)	
Resistance to ground	(point to ground)	<1 Mega Ohms

#### Application Properties

Mix Ratio	2A : 1B by volume
Pot Life (minutes)	30-40 @ 77 deg F
Application Temp.	(F. Min) 50 deg F

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

## **SUGGESTED USES**

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Tera-Gem III CFS can be used in electronic process areas, warehouses, electronic plants, clean rooms, and hospital facilities or operating rooms.

## **CHEMICAL RESISTANCE (PARTIAL LIST)**

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Although the CFS system performs well in many chemical environments, it is not recommended for continuous immersion service.

<b>Reagent</b>	<b>Film Integrity</b>
30% Nitric Acid	No Effect
30% Phosphoric Acid	No Effect
20% Hydrochloric Acid	No Effect
70% Sulfuric Acid	No Effect
10% Acetic Acid	No Effect
50% Sodium Hydroxide	No Effect
Urine	No Effect
Coffee/Tea	No Effect
Mustard	No Effect
Ketchup	No Effect
Household Cleaner (non-dye)	No Effect
Beer/Wine	No Effect
Rubbing Alcohol	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**

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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 3,000 psi. New concrete should be cured for a minimum of 28 days. Wet curing is the preferred method. User must notify manufacturer if conditions differ from above. To properly clean concrete surfaces, the concrete may be sandblasted, steel shot-blasted, scarified, or other approved technique.

## **SYSTEM APPLICATION**

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### **PATCHING IF NEEDED:**

Since this is a thin film coating, some patching of spalls, holes, and cracks may be required. Use Tera-Gem III RP45 – Epoxy Patch prior to coating.

### **CONDUCTIVE PRIME COAT:**

Mix Primer liquid components at a mix ratio of 2A: 1B by volume. Mix in a clean mixing vessel. To one weight equivalent of mixed liquid components, add 1 weight equivalent of pre measured conductive filler. Mix all components using an electric drill motor mixer or a plaster mixer. Mix all components for 2-3 minutes or until uniformly wetted. Transfer to installation area and using a squeegee and/or roller; apply to a thickness of 3 to 10 mils.

**CONDUCTIVE BASE COAT:**

Using the same liquid resins and procedure as above along with the pre-measured conductive filler and select graded silica aggregates for the Conductive Base Coat, apply by troweling the conductive matrix to nominal thickness of 1/8" or 1/4".

**DISSIPATIVE TOP COAT:**

Using the liquid components with the proper mix ratio of 2A: 1B by volume, add one weight equivalent of pre measured dissipative topcoat filler. Mix all components for 2 to 3 minutes or until uniformly wetted. Apply using a squeegee and/or roller to a thickness of 4-10 mils. For custom colors, all materials will be in pre-measured containers.

**MATERIAL HANDLING**

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

**PACKAGING**

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Tera-Gem III CFS System is available in pre-measured gallons, 3 gallons and 165-gallon units. Pre-measured conductive filler is supplied to its appropriate units.

**NOTES**

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The following information is available online at [www.teralite.com](http://www.teralite.com):

- Material Safety Data    - Color Selection    - Anti-Skid Recommendation    -Maintenance Suggestions
- Chemical Resistance

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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