TERA-GEM III

Troweled Decorative Chip System (DCS)

PRODUCT DESCRIPTION

Tera-Gem III Troweled Decorative Chip System (Troweled DCS) is a troweled tough wearing, 100% solids, solvent free (No VOC's – Meets all of California's VOC Requirements), seamless epoxy-aggregate composite with vinyl paint chips broadcast onto a pigmented surface designed for use as a protective coating for commercial and industrial environments. This product has excellent adhesion to concrete, tile and wood substrates. The Tera-Gem III Troweled DCS system is applied at a total thickness of 1/8"- ¼" consisting of the following:

PRIMER: A two-component moisture tolerant clear epoxy resin. Other primers can be substituted depending on application.

BASE COAT: A three component, troweled polymer composite consisting of epoxy resin, curing agent, with or without inorganic pigments and selected graded silica aggregates.

SEAL COATS: Consists of two pigmented seal coats, a broadcast of vinyl paint chips onto the surface (light to full broadcast) and then two clear seal coats of epoxy. An additional topcoat can be added depending upon application and texture demands.

PHYSICAL PROPERTIES

Compressive Strength	(ASTM C-579)	11,500 psi. AFTER 7 DAYS
Flexural Strength	(ASTM C-580)	4,500 psi.
Tensile Strength	(ASTM C-307)	2,500 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)	0.25%
Bond Strength, Primer	(ASTM 4541)	>400 psi

Physical Properties-Binder Cured 7 days

Tensile Strength	(ASTM D 638) psi	6,000 psi
Flexural Strength	(ASTM D 790) psi	9,400 psi
Flexural Modulus	(ASTM D 790) psi	3.05 x 10-5
Hardness	(ASTM 2240)	Shore D - 83
Abrasion Resistance	(ASTM 4060) CS10 Wheel	1000 cycles, wt loss (gm) - .034 gm
Water Spot Resistance	72 deg F. 8 hr cure	Pass

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 Troweled DCS will provide a long lasting, easy to maintain floor, with anti-skid properties that will stand up even in the most demanding of environments.

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SUGGESTED USES

Tera-Gem III Troweled DCS is suitable for restrooms, locker rooms, warehouses, water treatment facilities, food processing plants, beverage plants, distilleries, dairies, electronics plants, clean rooms, hospitals, commercial and restaurant kitchens, sanitary facilities, prisons and wet areas that require skid resistance and resistance to industrial chemicals.

CHEMICAL RESISTANCE (PARTIAL LIST)

Reagent	Film Integrity	Reagent	Film Integrity
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 3,000 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.

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SYSTEM APPLICATION

PRIMER:

Use Tera-Gem III DCS liquid A & B components as primer. Use a clean bucket and mix 2 parts of A to 1 part of B by volume. Stir with a mechanical agitator for 1-2 minutes. Distribute mixed material evenly over the floor surface using rollers or squeegees. Spread rate will vary from 70 to 150 sq. ft. per gallon depending on surface. Do not apply over standing water or let primer set before applying the base coat (aka body coat, troweled coat)

BASECOAT (AKA BODY COAT/TROWELED COAT):

Use a clean container and mix Tera-Gem III DCS liquid components at a ratio to 2 parts A to 1 part B by volume. To one weight equivalent of mixed liquid components add approximately 7 weight equivalent of aggregate. Mix all components using an electrical drill motor agitator or a plaster mixer. Mix all components for 2-3 minutes or until uniformly mixed. Transfer to installation area and trowel to a thickness of 1/8" to ¼". Other thicknesses are possible.

SEALERS/ANTI-SKID:

To seal the epoxy/aggregate composite for easier cleaning and to assure a non-skid property, apply two pigmented seal coats using the Tera-Gem III DCS liquid components. Mix in the same manner as described in the primer step. While the second pigmented seal coat is still wet broadcast vinyl paint chips in selected sprinkle rate (Light, Med, Heavy, or Full Broadcast). Let the surface cure. Mix and place first clear seal coat of epoxy, allow to cure overnight, sand floor and apply final clear topcoat of epoxy. Application rate of seal coats is approx. 125 sq. ft. per gallon. During the final seal coat process, if an anti-skid is required, incorporate graded silica aggregate to desired texture. See anti-skid recommendations for texture options.

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 system. Observe warning indications on the labels for each component.

PACKAGING

Tera-Gem III Troweled DCS 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

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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