TERA-GEM III

Decorative Chip System (DCS)

PRODUCT DESCRIPTION

Tera-Gem III Decorative Chip System (DCS) is a 100% solids, solvent free (No VOC's – Meets all of California's VOC Requirements), formulated epoxy coating system designed for light to medium traffic usage. When placed by trained installers it is a durable, seamless decorative flooring system that offers a textured finish. This product has excellent adhesion to concrete, wood, and existing epoxy substrates. The Tera-Gem III DCS system is a broadcast system applied at a total thickness of 1/16" – 1/8" (two lifts) consisting of the following:

FIRST COAT / BROADCAST: A two-component epoxy resin formulated with pigments followed immediately by a broadcast of vinyl paint chips until a uniform dry appearance is obtained and it will accept no more vinyl paint chips.

CLEAR SEAL COATS: The two seal coats are a repeat of the first coat without the application of vinyl paint chip broadcast. The clear seal coats seals the vinyl paint chips.
This system provides an orange peel type surface or aggregate can be incorporated into the final seal coat for texture.
An additional topcoat or urethane coat can be added depending upon application and texture demands.

PHYSICAL PROPERTIES

Compressive Strength	(ASTM C-579)	10,500 psi.
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 100% concrete Failure

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 DCS will provide a long lasting, easy to maintain floor.

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SUGGESTED USES

Tera-Gem III DCS is suitable for light to medium use areas, such as research facilities, laboratories, wash down areas, pharmaceutical facilities, etc. Tera-Gem III DCS is an excellent floor finish to be installed over existing epoxy floor finishes.

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.

SYSTEM APPLICATION

PATCHING IF NEEDED:

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

FIRST COAT / BROADCAST:

Use Tera-Gem III DCS liquid A & B components. 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. Immediately broadcast vinyl paint chips onto the wet surface until a uniform dry appearance is obtained (no shiny spots) and it will accept no more vinyl paint chips. Allow coat to cure fully (typically 8-14 hours depending on temperature). Recoat within 24 hours.

SECOND COAT/ANTI-SKID:

After first coat has cured, sweep off excess vinyl paint chips. Repeat the mixing and installation process described in the "First Coat", leaving out the broadcast. The second coat will encapsulate and seal the broadcast vinyl paint chips. The rate of application will vary from 75-125 sq. ft. per gallon. During the second seal coat process, if an anti-skid is required, incorporate graded silica aggregate to desired texture. See anti-skid recommendations for texture options.

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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 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.

REVOLAN SYSTEMS IS THE FORMULATING DIVISION OF TERA-LITE.

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