

TECHNICAL DATA SHEET

Specialty Products Development Group informations

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PRODUCT DESCRIPTION

EpoxyStarz is a solvent-free, no VOCs, virtually odorless two-component epoxy coating system with medium viscosity, which results with excellent resistance to UV rays, with one of the industry's slowest tendencies to yellow over time. The formulation of EpoxyStarz is based on the latest technological advancements in cycloaliphatic polyamines, providing outstanding properties and an impeccable aesthetic finish. Additionally, EpoxyStarz boasts superior mechanical and chemical properties, making it an ideal choice for both residential and commercial applications. Formulated primarily as a finishing coat, EpoxyStarz can also function as a base coat. Primer as an undercoat.

ADVANTAGES

- Essentially odorless and self-priming
- Compliant with low volatile organic compounds (VOC) standards
- Features high color stability
- Boasts high gloss and chemical resistance
- Has the potential for LEED eligibility
- Offers a seamless system that withstands moderate traffic at a minimal thickness of 8Mils
- Provides the industry's best UV resistance
- Environmentally friendly with 100% solids and no VOCs or solvents
- Exhibits excellent elongation and abrasion resistance
- High resistance to amine blush and contaminants
- Superior mechanical and chemical properties
- Impermeable and mold-resistant
- High product density prevents dirt penetration and facilitates easy maintenance

SURFACE PREPARATION

Not all surfaces are the same. It is recommended to create a sampling area before the start of the project. The test should be conducted on-site, using the method suggested by Specialty Products Development Group, to ensure proper adhesion and color. A sampling area should also be conducted on existing coatings to determine if there are contaminants or if delamination will occur.

- Dry - No wet areas (<4% moisture content).
- Clean - Remove contaminants, dust, grease, delaminated coating, laitance, or any other substances that may reduce or prevent proper adhesion.
- Profiled - Mechanically profiled surface CSP2-4 (ICRI).
- Sanitized - Repair all cracks and chipped areas. Concrete preparation must be carried out by mechanical means such as shot blasting, grinding, sandblasting, or any other method approved by Specialty Products Development Group

Cavities, cracks, and imperfections will be visible in the coating if the concrete is not properly repaired. Smooth and fill concrete voids with filler. Once the material has hardened, correct any imperfections through diamond grinding.

MIXING

EpoxyStarz mix ratio 2A:1B, meaning two parts A (resin) to one part B (hardener). Typically, mixing three gallons of EpoxyStarz at a time is ideal for application. Mix using a drill and a mixing paddle. Note: if using a drill mixer, use a low speed (not exceeding 300 rpm) to avoid trapping air.

1. Add 1 gallon of Part B to the pre-mixed 2 gallons of Part A and mix for an additional 3 minutes.
2. EpoxyStarz is designed to be poured directly onto the floor. Allowing the mixed product to sit in the container will significantly reduce working time. Once poured on the floor, you can generally expect 30-40 minutes of working time.

APPLICATION

1. For a solid-color coating system, apply EpoxyStarz in two coats or in a single pass as a finishing layer. For estimation purposes, anticipate coverage from 25 SF (colored) up to 200 SF per gallon in both cases.
2. Always apply at decreasing temperatures. Concrete is porous and traps air. During rising temperatures (typically in the morning), air expands and can cause gas release in the coating. It is safer to apply coatings in the late afternoon, especially for outdoor applications.
3. The optimal ambient temperature should be between 18 and 28°C (65 and 82°F) during application.
4. Mix three gallons of resin using the mixing instructions above.
5. Apply approximately 25 SF (colored) up to 200 SF per gallon by pouring directly onto the surface in a ribbon pattern while walking and pouring simultaneously until the bucket is empty.
6. Using a squeegee on an extension, pull the EpoxyStarz onto the substrate. As a first coat on bare concrete, pull the resin as thinly as possible while wetting the concrete and evenly covering the surface. This allows trapped air to escape more easily. To apply in a single coat over existing EpoxyStarz, pull at approximately 150-200 SF per gallon.
7. Using a 10 mm lint-free roller, roll the coating evenly forward and backward.
8. Finally, roll back in the opposite direction of step 6.
9. Apply the second coat by repeating steps 1 to 7 the next day.
10. Sweep the floor and sand high points or imperfections.
11. Apply the finishing layer at approximately 125 SF per gallon. Use the same procedure as in step 4, but without broadcasting.
12. For a double-broadcast system of 100 to 125 Mils, repeat the above steps.
13. If additional protection against chemicals and abrasion is required, contact your representative for recommendations.

BROADCAST SYSTEM APPLICATION

Flake Broadcast:

1. After following steps 1 to 4 of the application instructions, proceed to broadcast the color flakes (120-200 SF per 25 lb box) by tossing them into the air and allowing them to gently rain down into the wet resin.
2. For a random/partial broadcast, use 1 lb of flakes per 100 SF.
3. Allow to dry. Then, scrape the base layer with a drywall scraper in all directions. Alternatively, lightly sand the flakes using a floor maintenance machine (sanding will provide a smoother finish). Vacuum up small pieces and dust thoroughly. (Failure to vacuum sufficiently may result in poor coating adhesion.)

Silica Sand/Quartz Broadcast:

1. Following step 6 of the application instructions, gently toss the silica sand into the air, allowing it to fall without clumping in one spot or displacing the resin. Continue this process
2. until the floor is fully saturated with silica sand, and the resin no longer accepts more. This typically requires 1/2 to 3/4 lb. per SF. Allow to dry for 4 to 6 hours.
3. Sweep the floor and sand high points.
4. Apply the final finishing layer
5. Apply additional UV protection on epoxy (optional)

PRODUCT INFORMATION

Packaging	3 US gal (11.35 L)
Color	PART A: Clear PART B: Clear to amber
Coverage	75 - 600 P.C.
Application Temperature	65-90°F (18-32°C)
Shelf Life	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.
Mix Ratio, by volume	A:B = 2:1
Pot Life	10-15 minutes @ 21°C
Open Time on Substrate	30-40 minutes

PRODUCT PROPERTIES

@ 21°C AND 50% R.H.

Solids Content, by volume	100%	
Solids Content, by weight	100%	
Thinner Recommended	None	
Waiting Time/ Overcoatability	24 hours	
Curing times	FOOT TRAFFIC	TRAFFIC
	24 hours	48 hours
Bond Resistance (psi), ASTM D4541	> 350 (substrate fails)	
Permeability (%), ASTM D570	0.1%	
Hardness (Shore D), ASTM D2240	85	
Abrasive resistance, ASTM D4060	75-80 mg	
Traction Resistance (psi), ASTM D638	3,900 (26.9mPa)	
Compressive Strength (psi), ASTM C579	7,800 (53.7mPa)	
Flammability	Class I (Not considered Flammable)	
Flash Point	>200°F - >93°C	

* Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.

CHEMICAL PROPERTIES

Reactive	Data
ASTM 1308, Covered for 7 days	
Detergent Solution (5% Ajax)	Unaltered
20% Sodium Chloride	Unaltered
20% Calcium Chloride	Unaltered
20% Ammonia	Unaltered
20% Trisodium Phosphate	Unaltered
20% Caustic Soda	Unaltered
3% Javex	Unaltered
Mineral Spirits	Unaltered
Methanol	Unaltered
Toluene	Unaltered
Xylene	Unaltered
10% Hydrochloric Acid	Unaltered
10% Citric Acid	Unaltered
5% Lactic Acid	Unaltered
Unleaded Gasoline	Unaltered
Coffee	Unaltered
Tea	Unaltered
Beer	Unaltered
Skydrol	Unaltered
10% Nitric Acid	Some yellowing
10% Sulfuric Acid	Light discoloring

CLEANING

Clean all tools and materials with an epoxy cleaner/thinner. Wash hands and skin thoroughly with warm soapy water. Once the product has cured, removal is possible only through mechanical means.

RESTRICTIONS

Concrete slabs at ground level emit invisible moisture vapor. Acceptable moisture emissions for concrete are 3 lbs per 1,000 SF over a 24-hour period (<4%) based on a calcium chloride test. Additionally, a relative humidity (RH) test can be conducted to assess moisture vapor. RH test results should be below 85% according to ASTM F2170. If moisture is above this level, blistering and coating delamination may occur. A calcium chloride or RH test should be performed to determine concrete moisture levels. If moisture levels exceed 85% for the RH test or 3 lbs. for the calcium chloride test, a concrete moisture control system must be used before applying the coating system.

Coating systems are prone to cracking if the concrete shifts or separates under the coating. Therefore, joint and crack treatment should be reviewed before coating application. Typically, control joints (saw cuts) and random cracks should first be sawed or chiseled, then filled. Construction/cold joints (where two slabs meet and thus move) must be addressed. Once the coating is applied and cured, saw the coating above construction joints and apply elastomeric caulking.

HEALTH AND SAFETY

In case of skin contact, wash with soap and water. In case of eye contact, rinse immediately with water for at least 15 minutes and consult a doctor. If respiratory issues arise, move the affected person to fresh air, remove contaminated clothing, and clean before reuse. Components A and B contain toxic substances, so avoid prolonged skin contact, eye contact, and inhalation of vapors. Use safety glasses, chemical-resistant gloves, and an NIOSH/MSHA-approved breathing apparatus with organic vapor filtration. Adequate ventilation is recommended.

Consult the material safety data sheet for more information.

DISCLAIMER

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