ADVANCED RESINS

EPOXY COAT

High-Build Epoxy for Metallic System - **High Viscosity**

TECHNICAL DATA SHEET

Specialty Products Development Group informations

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PRODUCT DESCRIPTION

Epoxy Coat is a solvent-free, two-component epoxy coating system with high viscosity. Its general purposes are epoxy primer, coating, and flooring mortar binder for broadcast and hand-troweled or power-troweled products.

ADVANTAGES

- Creates a Strong and Durable Floor.
- Exhibits Robust Chemical and Abrasion Resistance.
- Suitable for new and resurfaced old floors.
- Complies with USDA, FDA, and the Food Safety Modernization Act
- Provides Slip Resistance (ADA)
- Meets LEED® and Green Seal® requirements
- 100% Solids, Zero VOC, and EPA Compliant
- Low odor during installation. Cures to an inert finish

SURFACE PREPARATION

It is imperative that the concrete surface is thoroughly dry prior to applying this floor coating material. This necessitates conducting concrete moisture assessments, specifically ASTM F1869 (calcium chloride) or ASTM F2170 (in situ relative humidity probe). For precise moisture leve, contact Specialty Products Development Group.

Both the temperature of the floor and the material must meet or exceed the values specified in the provided Technical Data Sheet. Additionally, the dew point should be at least 5°F (3°C) lower than the surface temperature. **It's vital to avoid application when humidity levels reach or surpass 95%.**

Concrete must be structurally sound, free of curing agents, coatings, sealers, densifiers, and other bond breakers. Adhere to the guidelines set forth in ICRI Guideline No. 310.2R for Choosing and Defining Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Restoration. Additionally, it's essential that the pH level of the concrete substrate registers at 9 or higher. Furthermore, eliminate any substances that hinder adhesion, such as bond-breaking materials.

Old concrete

Use primer if field tests or laboratory analysis reveals inferior concrete flooring slabs containing contaminants from previously applied unreacted silicate materials.

Contaminants include but are not limited to organic hydrocarbon materials, calcium chlorides, and aluminum stearates.

Concrete flooring slabs may lose structural strength over time due to factors beyond the control of the flooring manufacturer or installation contractor.

If the concrete substrate deteriorates to the point where it can no longer support the bond of the remediation floor system, consult ACI 201.2R «Guide to Durable Concrete» from the American Concrete Institute.

New concrete

Comply with ACI 302.2R Guide for Concrete Slabs that Receive Moisture-Sensitive Floor Materials.

Maintain a water-cement ratio of 0.4 to 0.5 and a strength level of approximately 4,000 psi (28 MPa).

Use a positive side moisture barrier per ASTM E1745 Standard Specification for Plastic Water Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs. The moisture barrier should be Class A, 15 mils (0.38 mm), and placed per ASTM E1643 Standard Practice for Selection, Design, Installation of Water Vapor Retarders Used in Contact with the earth or Granular Fill Under Concrete Slabs.

MIXING

To simplify the mixing and application process, it's recommended to maintain the temperature of both the «A» and «B» components within the range of 70°F to 80°F (20°C to 26°C). Mix ratio = 2A:1B. It's crucial to thoroughly blend both «A» and «B» components to ensure even distribution of raw materials and pigments.

APPLICATION

Following the prescribed mixing process, promptly pour the liquid material onto the adequately prepped concrete surface. Alternatively, dispense the material in ribbons and evenly spread it using a squeegee for the next epoxy lift. It's vital to back-roll and cross-roll the material to ensure the proper application of the coat, lock coat, grout coat, topcoat, and finish coat. Verify the desired wet film thickness using a WFT Gauge. If you're broadcasting aggregate, do so onto the wet material. Include the trowel mortar mix as per the installation sequence. Adhere to all the steps outlined in the Installation Guidelines.

PRODUCT INFORMATION

PACKAGING		3 US gal (11.35 L)	
COLOR		PART A: Clear PART B: Clear to amber	
RECOMMENDED THICKNESS		PRIMER	FINISH COAT
	SOLID COLOR	14.9 to 18.9 mils (160-200 ft²/gal)	9.3 to 14.9 mils (100-160 ft²/gal)
	FLAKES SYSTEM	Rate varies depending on the thickness of the system selected. 1/16 to 1/4 inch (1.59 to 6.35 mm) and more.	
	METALLIC SYSTEM		
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 16 oz (454 g)		40-50 minutes @ 77°F (25°C)	
OPEN TIME ON SUBSTRATE		45-60 minutes	
VOC		<5 g/L	
Viscosity		550 to 750 cps @ 77°F (25°C)	

PRODUCT PROPERTIES

@ 77°F (25°C) - unless otherwise mentioned.

Solids Content, by volume	100%		
Solids Content, by weight	100%		
Density (kg/L)	PART A	PART B	MIX
CLEAR	1.15	0.9 - 1.0	-
COLOURS	1.15	0.9 - 1.0	-
Thinner Recommended	Xylene		

Waiting Time/ Overcoatability	SUBSTRATE TEMPERATURE	MINIMUM	MAXIMUM
Before Applying **Epoxy Coat** over primer	> 50ºF (10ºC)	24 hours	3 days
	> 68ºF (20ºC)	12 hours	2 days
	> 86ºF (30ºC)	6 hours	1 day
Before Applying Second Coat of **Epoxy Coat**	> 50ºF (10ºC)	30 hours	3 days
	> 68ºF (20ºC)	24 hours	2 days
	> 86ºF (30ºC)	16 hours	1 day

Curing details	SUBSTRATE TEMPERATURE	FOOT TRAFFIC	LIGHT TRAFFIC	FULL CURE
	> 50ºF (10ºC)	30 hours	5 days	10 days
	> 68ºF (20ºC)	24 hours	3 days	7 days
	> 86ºF (30ºC)	16 hours	2 days	5 days
SERVICE TEMPERATURE	-4ºF to 122ºF (-20ºC to 50ºC)			

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

Surface Preparation ICRI Guideline No. 310.2R (CSP 2 to CSP 4), Depending on System being Installed and Concrete Condition.	
Compress Strength, ASTM D695	10,000 psi (68.9 mpa)
Tensile Strength, ASTM D638	2,500 psi (17.2 mpa)
Tensile Elongation, ASTM D638	20%
Adhesion, ASTM D7234	>400 psi (2.75 mpa)
Hardness (Shore D) ASTM D2240	67 – 72
Water Absorption, ASTM D570	0.1%
Microbial (fungi) Resistance, ASTM G21 without an anti-microbial agent)	Pass < 1
Dynamic Coefficient of Friction, ANSI 326.3, Depends on Finished Coat Texture. This test must be run in the field after placement of the Finish Coat by a BOT 3000E Third Party Testing Firm to Validate.	>0.45 (inclines) >0.42 (level)
Moisture Vapor Emission Rate, ASTM F1869*	3 lb
Moisture Relative Humidity, ASTM F2170*	80% rh
*Although testing is critical, it does not means against future Problems. This is especially true if there is not a positive side vapor barrier installed per ACI 302.2R and ASTM F1754. Concrete must be sound and durable per ACI 201.2R and be free of bond breaking properties and/or concrete contamination from oil, chemical spills, densifiers, excessive salts and other bond breakers. Relative humidity and moisture must not exceed test limits.	

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

CLEANING

Perform necessary cleaning of the mixing station, tools, and equipment. Employ acetone, which is a solvent exempt from volatile organic compounds (VOCs), for the cleanup process. Always adhere to legal, health, and safety regulations when handling or storing solvents and materials, especially in enclosed spaces. Ensure that the work areas remain well-ventilated throughout the placement and curing phases.

RESTRICTIONS

- The most suitable temperature range for using this product is between 60°F to 90°F (16°C to 32°C).
- Please note that scratches may give the appearance of whiteness in specific colors, particularly with blue-pigmented products.
- Elevated temperatures will lead to reduced working times and faster drying times.
- Color variations may occur due to differences between batches; it's advisable to mix and apply different batches together to mitigate this.
- Avoid using this product as a primer when the concrete slab exceeds 3 lbs. or 80% relative humidity.

STORAGE

Ship and store material between 40°F to 90°F (4°C to 32°C). Store in a dry environment and out of direct sunlight.

SHELF LIFE

Shelf life is 1 year from the date of manufacturer, provide the containers are unopened.

DISPOSAL

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulations.

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

The information presented in this document, including guidelines, recommendations, statements, and technical data, is founded upon available information and tests. It's important to note that the accuracy and comprehensiveness of these tests are not guaranteed and should not be interpreted as an expressed or implied warranty. It is the responsibility of the user to maintain records of information and tests in order to determine how the product aligns with their specific requirements. The application, job conditions, and user assume all associated risks and liabilities related to the product's utilization.

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The technical and application information is provided to offer a general overview of the material and appropriate application methods. Test performance results were obtained in a controlled environment, and it should not be assumed that these tests, or any other tests, precisely represent all possible environmental conditions. We are not responsible for any typographical errors.