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EPOXY 49 TM - TECHNICAL DATA SHEET (TDS)

100% Solids Cycloaliphatic High-Build Clear Floor Epoxy & Metallic Base Coat | Document Rev: 2026.11

MIX RATIO (A:B)	SOLIDS CONTENT	WORKING TIME (SLAB)	SHORE D HARDNESS
2A : 1B by Volume	**100% (Zero VOC <10 g/L)**	**30-45 Min @ 72 deg F**	**82-85 Shore D**

1. PRODUCT DESCRIPTION & COMMERCIAL USE

EPOXY 49 is a commercial-grade, 100% solids two-component cycloaliphatic clear epoxy engineered as a high-build body coat, metallic pigment suspension matrix, and full-broadcast vinyl flake receiver coat for heavy residential, commercial, and industrial concrete slabs. Formulated for crystal clarity, self-leveling air release, and zero solvent shrinkage.

2. ASTM PHYSICAL & PERFORMANCE PROPERTIES (TESTED @ 72 deg F / 50% RH)

PROPERTY	TEST METHOD	TYPICAL VALUE / SPECIFICATION
Volume Solids Content	ASTM D2697	**100% Solids (Zero Solvent)**
VOC Content	EPA Method 24 / SCAQMD 1113	**< 10 g/L (Super-Compliant All 50 States)**
Mix Ratio (Part A : Part B)	By Volume / By Weight	**2 Parts A : 1 Part B by Volume (100A : 50B Weight)**
Mixed Viscosity @ 77 deg F (25 deg C)	ASTM D2196 (Brookfield)	**700 - 900 cps (Self-Leveling)**
Shore D Hardness (Full Cure)	ASTM D2240	**82 - 85 Shore D**
Compressive Strength	ASTM D695	**11,500 psi (79.3 MPa)**
Tensile Strength	ASTM D638	**7,800 psi (53.8 MPa)**
Flexural Strength	ASTM D790	**9,800 psi (67.6 MPa)**
Pull-Off Concrete Adhesion	ASTM D4541 / ACI 503R	**> 450 psi (100% Cohesive Concrete Failure)**
Taber Abrasion Resistance	ASTM D4060 (CS-17, 1000g, 1k cyc)	**< 38 mg Loss**
Water Absorption (24 Hr)	ASTM D570	**< 0.10%**
Pot Life (1-Gal Mass @ 72 deg F)	Internal Exotherm Test	**20 - 30 Minutes (Pour Onto Slab Immediately)**
Recoat Window @ 72 deg F / 50% RH	Field Cure Schedule	**8 - 24 Hours (Abrade w/ 80-Grit if >24 Hrs)**
Return to Service	Foot / Full Vehicle Traffic	**24 Hours Light Foot | 72 Hours Full Vehicle**

3. SURFACE PREPARATION, MIXING & FIELD APPLICATION PROTOCOL

* 1. Concrete Prep: Diamond grind concrete to ICRI CSP 2-3 profile. Remove all laitance, curing compounds, oil, and dust.
* 2. Moisture Testing: Verify slab MVER <= 3.0 lbs/1,000 sq ft/24 hr (ASTM F1869) and RH <= 75% (ASTM F2170). If higher, prime with MVB 49.
* 3. Priming: Apply PRIMER 49 (6-8 mils) or MVB 49 (16 mils) prior to EPOXY 49 body coat to prevent outgassing pinholes.
* 4. Mixing: Pre-mix Part A for 60 sec (add 150g Metallic Pigment per gallon of Part A if desired). Add 2 Parts A to 1 Part B by volume.
* 5. Mechanical Blend: Mix with low-speed drill (350 RPM) and Jiffy/helical blade for 3 full minutes, scraping bucket walls and bottom.
* 6. Immediate Ribbon Pour: Pour mixed material onto floor in ribbons immediately. Leaving mixed mass in bucket causes flash exotherm.
* 7. Coverage Rates: Flake Broadcast Receiver: 150-200 sq ft/gal (8-10 mils) | Metallic Flood Coat: 40-50 sq ft/gal (32-40 mils).

4. OSHA GHS SAFETY & HANDLING SUMMARY (REFER TO FULL SDS BEFORE USE)

* SIGNAL WORD: Part A (Epoxy Resin) = WARNING | Part B (Cycloaliphatic Amine Hardener) = DANGER (OSHA GHS).
* Hazard Statements: Part B: H314 Severe skin burns/eye damage. Part A & B: H317 Skin sensitizer, H411 Aquatic toxicity.
* Required PPE: Nitrile gloves, splash-proof chemical goggles, long sleeves, and organic vapor respirator in enclosed areas.
* First Aid: Eyes - Flush continuously with water for 15 minutes and seek immediate medical attention. Skin - Wash with soap and water.
* Storage & Shelf Life: Store tightly sealed between 60 deg F-85 deg F (15 deg C-30 deg C) in a dry area. 12-month unopened shelf life.