

Sikadur® 32, Hi-Mod

High-modulus, high-strength, epoxy bonding/grouting adhesive

Description	Sikadur 32, Hi-Mod, is a multi-purpose, 2-component, 100% solids, moisture-tolerant structural epoxy adhesive. It conforms to the current ASTM C-881, Types I, II, and V, Grade-2, Class C and AASHTO M-235 specifications.
Where to Use	<ul style="list-style-type: none"> ■ Bond fresh, plastic concrete to hardened concrete and steel. ■ Grout horizontal cracks in structural concrete and wood by gravity feed. ■ Machinery and 'robotic' base-plate grout. ■ Structural adhesive for concrete, masonry, metal, wood, etc.
Advantages	<ul style="list-style-type: none"> ■ Super-strength bonding/grouting adhesive. ■ Tolerant to moisture before, during and after cure. ■ Excellent adhesion to most structural materials. ■ Convenient easy-to-mix ratio A:B = 1:1 by volume. ■ Easy-to-use for bonding/grouting applications. ■ Fast initial set; rapid gain to ultimate strengths. ■ USDA-certified for use in food plants.
Coverage	<p>Bonding Adhesive - 1 gal. covers approximately 80 sq. ft. on smooth surface.</p> <p>Base Plate Grout - 1 gal. mixed with 1.5 parts oven-dried aggregate by loose volume yields approximately 420 cu. in. of grout.</p> <p>Anchoring grout - 1 gal. yields 231 cu. in. of grout.</p>

Typical Data (Material and curing conditions @ 73°F {23°C} and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	2 years in original, unopened containers.		
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F (18°-24°C) before using.		
Color	Concrete gray		
Mixing Ratio	Component 'A': Component 'B' = 1:1 by volume.		
Viscosity	Approximately 3,000 cps.		
Pot Life	Approximately 30 minutes. (60 gram mass). Approximately 22 minutes. (350 gram mass, 8 oz.)		
Contact Time	40°F (4°C)*: 12 hrs.	73°F (23°C)*: 3-4.5 hrs.	90°F (32°C)*: 1.5-2 hrs
Compressive Modulus, psi	7 day	2.1 X 10 ⁵ psi (1,449 MPa)	
Tensile Properties (ASTM D-638)			
	7 day	Tensile Strength	6,900 psi (48 MPa)
		Elongation at Break	1.9%
	14 day	Modulus of Elasticity	5.4 X 10 ⁵ psi (3,726 MPa)
Flexural Properties (ASTM D-790)			
	14 day	Flexural Strength (Modulus of Rupture)	7,000 psi (48.3 MPa)
		Tangent Modulus of Elasticity in Bending	6.9 X 10 ⁵ psi (4,800 MPa)
Shear Strength (ASTM D-732)	14 day	Shear Strength	6,200 psi (43 MPa)
Water Absorption (ASTM D-570)	7 day	(24 hour immersion)	0.21%
Heat Deflection Temperature (ASTM D-648)			
	7 day	[fiber stress loading 264 psi (1.8 MPa)]	122°F (50°C)
Bond Strength (ASTM C-882):			
	2 day (moist cure)	Plastic Concrete to Hardened Concrete	1,700 psi (11.7 MPa)
		Hardened Concrete to Hardened Concrete	2,000 psi (13.8 MPa)
		Hardened Concrete to Steel	1,900 psi (13.1 MPa)
	14 day (moist cure)	Plastic Concrete to Hardened Concrete	2,200 psi (15.1 MPa)
		Plastic Concrete to Steel	2,000 psi (13.8 MPa)
		Hardened Concrete to Hardened Concrete	2,000 psi (13.8 MPa)

Compressive Properties (ASTM D-695)

Compressive Strength, psi (MPa)		40°F* (4°C)	73°F* (23°C)	90°F* (32°C)
8 hour		-	140 (1.0)	1,700 (11.7)
16 hour		-	4,800 (33.1)	7,300 (50.3)
1 day		30.0 (0.2)	5,700 (39.3)	7,300 (50.3)
3 day		5,300 (36.6)	11,300 (77.9)	10,400(71.7)
7 day		9,600 (66.2)	11,800 (81.4)	10,400(71.7)
14 day		11,900 (82.1)	12,200 (84.1)	10,400(71.7)
28 day		12,600 (86.9)	12,200 (84.1)	10,500(72.4)

*Material cured and tested at the temperatures indicated.



Packaging	1, 2 and 4 gal. units.
How to Use	Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust,
Surface Preparation	laitance, grease, curing compounds, impregnations, waxes and any other contaminants. Preparation Work: Concrete - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blastcleaning or other equivalent mechanical means. Steel - Should be cleaned and prepared thoroughly by blastcleaning.
Mixing	Pre-mix each component. Proportion equal parts by volume of Component 'A' and Component 'B' into clean pail. Mix thoroughly for 3 minutes with Sika paddle on low-speed (400-600 rpm) drill until blend is a uniform color. Mix only that quantity that can be applied within its pot life.
Application	To bond fresh concrete to hardened concrete - Apply by brush, roller, broom or spray. Place fresh concrete while Sikadur 32, Hi-Mod, is still tacky. If coating becomes glossy and loses tackiness, remove any surface contaminants then recoat with additional Sikadur 32 Hi-Mod, and proceed. To grout baseplates - Add up to 1 1/2 parts of oven-dried aggregate to 1 part of mixed Sikadur 32, Hi-Mod, by volume. Place grout under baseplate. Avoid contact with the underside of the plate. A 1/4 to 3/8 in. (6 to 10 mm) space should remain between the top of the grout and the bottom of the plate. Maximum thickness of grout per lift is 1.5 in. (38 mm) If multiple lifts are needed, allow preceding layer to cool to touch before applying additional layer. The remaining 1/4 to 3/8 in. (6 to 10 mm) space should be filled with neat Sikadur 32 Hi-Mod. Pour a sufficient quantity of neat epoxy to allow the level to rise slightly higher than the underside of the bearing plate. To gravity feed cracks - Pour neat material into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.
Limitations	<ul style="list-style-type: none"> ■ Minimum substrate and ambient temperature 40°F (4°C). ■ For spray applications, consult Technical Service at 800-933-7452. ■ Use only oven-dry aggregate. ■ Material is a vapor barrier after cure. ■ For applications on exterior, on-grade substrates, consult Technical Services at 800-933-7452. ■ Do not apply over wet, glistening surface. ■ Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.
Warning	Component 'A' - IRRITANT; SENSITIZER - Contains epoxy resin, nonyl phenol. Can cause skin sensitization after prolonged or repeated contact. Eye irritant. May cause respiratory irritation. Harmful if swallowed. Component 'B' - CORROSIVE; IRRITANT; SENSITIZER - Contains amines, silica (quartz), and benzylalcohol nonyl phenol. Contact with eyes or skin causes severe burns. Can cause skin sensitization after prolonged or repeated contact. Skin/respiratory/eye irritant. Harmful if swallowed. Deliberate concentration of vapors of Component A or B for purposes of inhalation is harmful and can be fatal. Cured material, if sanded, may result in exposure to a chemical known to the state of California to cause cancer.
First Aid	Eyes: Hold eyelids apart and flush thoroughly with water for 15 minutes. Skin: Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. Inhalation: Remove person to fresh air. Ingestion: Do not induce vomiting. In all cases, contact a physician immediately if symptoms persist.
Clean Up	Wear chemical resistant gloves/goggles/clothing. Ventilate area. In absence of adequate general and local exhaust ventilation, use a properly filled NIOSH respirator. Confine spill. Collect with absorbent material. Dispose of in accordance with current, applicable local, state and federal regulations. Uncured material can be removed with solvent. Strictly follow manufacturer's warnings and instructions for use. Cured material can only be removed mechanically.
Handling & Storage	Avoid direct contact with skin and eyes. Wear chemical resistant gloves/goggles/clothing. Use only with adequate ventilation. In absence of adequate general and local exhaust ventilation, use a properly filled NIOSH respirator. Wash thoroughly after handling product. Launder clothing before reuse. Store in a cool dry well ventilated area.

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