



Sikadur[®] 32, Hi-Mod

8/00

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 and AASHTO M-235 specifications.

WHERE TO USE

- ▲ Bond fresh, plastic concrete to hardened concrete and steel.
- ▲ Grout bolts, dowels, and pins, etc.
- ▲ 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

- ▲ 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.
- ▲ Free of service-inhibiting polysulfides.
- ▲ Fast initial set; rapid gain to ultimate strengths.
- ▲ Potable-water approved.

COVERAGE

Bonding Adhesive - 1 gal. covers approximately 80 sq. ft. on smooth surface.
Base Plate Grout - 1 gal. mixed with 1 1/2 parts oven-dried aggregate by loose volume yields approximately 420 cu. in. of grout.
Adhesive and anchoring grout - 1 gal. yields 231 cu. in. of grout.

PACKAGING

2- and 4-gal. units; 1-qt. units, 12/case.

HOW TO USE

SURFACE PREPARATION

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, 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 blast cleaning or other equivalent mechanical means.

Steel - Should be cleaned and prepared thoroughly by blast cleaning.

TYPICAL DATA FOR SIKADUR 32, HI-MOD (Material and curing conditions @ 73F (23C) and 50% R.H.)

SHELF LIFE	2 years in original, unopened containers.		
STORAGE CONDITIONS	Store dry at 40-95F (4-35C). Condition material to 65-75F (18-24C) before using.		
COLOR	Concrete gray.		
MIXING RATIO	Component 'A': Component 'B' = 1:1 by volume.		
VISCOSITY	Approximately 2,800 cps.		
POT LIFE	Approximately 30 minutes. (60 gram mass)		
CONTACT TIME	40F* (4C) 14-16 hr	73F* (23C) 3.5-4 hr	90F* (32C) 1.5-2 hr
COMPRESSIVE MODULUS, PSI: 7 day	2.0 X 10 ⁵ psi (1,379 MPa)		
TENSILE PROPERTIES (ASTM D-638): 7 day	Tensile Strength Elongation at Break		
14 day	Modulus of Elasticity		
		5,100 psi (35.1 MPa) 1.8% 3.2 X 10 ⁵ psi (2,207 MPa)	
FLEXURAL PROPERTIES (ASTM D-790): 14 day	Flexural Strength (Modulus of Rupture) Tangent Modulus of Elasticity in Bending		
		7,400 psi (51 MPa) 4.7 X 10 ⁵ psi (3,200 MPa)	
SHEAR STRENGTH (ASTM D-732): 14 day	Shear Strength		
		5,900 psi (40.6 MPa)	
WATER ABSORPTION (ASTM D-570): 24 hour	0.79%		
DEFLECTION TEMPERATURE (ASTM D-648): 7 day	Deflection Temperature (fiber stress loading 264 psi)		
		121F (49C)	
BOND STRENGTH (ASTM C-882): 2 day (moist cure) 14 day (moist cure)	Plastic Concrete to Hardened Concrete Plastic Concrete to Hardened Concrete Plastic Concrete to Steel		1,700 psi 2,400 psi 1,900 psi
COMPRESSIVE PROPERTIES (ASTM D-695): COMPRESSIVE STRENGTH, PSI	40F* (4C)	73F* (23C)	90F* (32C)
8 hour	-	-	100 (.18 MPa)
16 hour	-	2,400 (16.5 MPa)	4,500 (31 MPa)
1 day	-	4,600 (31.7 MPa)	6,400 (44.1 MPa)
3 day	800 (5.5 MPa)	8,100 (55.8 MPa)	8,200 (56.5 MPa)
7 day	8,100 (55.9 MPa)	10,300 (71 MPa)	8,200 (56.5 MPa)
14 day	8,100 (55.9 MPa)	10,300 (71 MPa)	8,200 (56.5 MPa)
28 day	8,800 (60.7 MPa)	10,300 (10,300 MPa)	8,200 (56.5 MPa)

*Material cured and tested at the temperatures indicated.

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 anchor bolts, dowels, and pins - Use neat. For efficient transfer of stress, the hole should be no greater in diameter than 1/4 in. larger than the bar, pin, or rod to be embedded. Depth of embedment is typically 10 to 15 bar diameters, but should be to the engineer's instruction.

To grout base plates - 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 base plate. Avoid contact with the underside of the plate. A 1/4 to 3/8 in. space should remain between the top of the grout and the bottom of the plate. Maximum thickness of grout per lift is 1 1/2 in. If multiple lifts are needed, allow preceding layer to cool to touch before applying additional layer. The remaining 1/4 to 3/8 in. 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

- ▲ Minimum substrate and ambient temperature 40F (4C).
- ▲ For spray applications, consult Technical Service.
- ▲ Use only oven-dry aggregate.
- ▲ Material is a vapor barrier after cure.
- ▲ For applications on exterior, on-grade substrates, consult Technical Service.

CAUTION

Component 'A' - Irritant; Sensitizer - Contains epoxy resin. Can cause skin sensitization after prolonged or repeated contact. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH/MSHA approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

Component 'B' - Corrosive; Sensitizer - Contains amines and crystalline silica (sand). Contact with eyes or skin may cause severe burns. Can cause skin and/or respiratory sensitization after prolonged or repeated contact. Skin and eye irritant. High concentrations of vapor may cause respiratory

irritation. If sanded, crystalline silica dust may be generated and may cause delayed lung injury (silicosis) and is listed as a suspect carcinogen by NTP and IARC (2A). Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical-resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH/MSHA approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

FIRST AID

In case of skin contact, wash immediately and thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician immediately. For respiratory problems, remove person to fresh air. Wash clothing before re-use.

CLEAN UP

Ventilate area. Confine spill. Collect with absorbent material. Dispose of in accordance with current, applicable local, state, and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

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**KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION**

**KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY**

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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