Product Data Sheet Edition 10.1.2014 Sikadur® 32, Hi-Mod

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 epox adhesive. It conforms to the current ASTM C-881, Types I, II, and V, Grade-2, Class C and AASHTO M-238 specifications.		
Where to Use	 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	 High-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	Bonding Adhesive - 1 gal. covers approximately 80 ft. ² on smooth surface. Base Plate Grout - 1 gal. mixed with 1.5 parts oven-dried aggregate by loose volume yields approximately 420 cu. in. of grout. Anchoring grout - 1 gal. yields 231 cu. in. of grout.		
Packaging	1, 2 and 4 gal. units.		

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 10⁵ psi (1,449 MPa)

Tensile Properties (ASTM D-638)

Tensile Strength 6,900 psi (48 MPa)

Elongation at Break 1.9%

14 day Modulus of Elasticity 5.4 X 10⁵ 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 10⁵ 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)



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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.

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 blastcleaning or other equivalent mechanical means.

Steel - Should be cleaned and prepared thoroughly by blastcleaning or other equivalent mechanical means.

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

- 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.

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