

Sikadur® 42, Grout-Pak

Pre-proportioned, epoxy, baseplate grouting system

Description	Sikadur® 42, Grout-Pak is a 3-component, 100% solids, moisture-tolerant, epoxy baseplate grouting system.
Where to Use	<ul style="list-style-type: none"> ■ Precision seating of baseplates. ■ Precision grouting of wind turbine tower bases requiring rapid strength gain. ■ Grouting under equipment, including heavy impact and vibratory machinery, reciprocating engines, compressors, pumps, presses, etc. ■ Grouting for "pour-back" anchorage on post tensioning projects (e.g. segmental bridge). ■ Grouting under crane rails.
Advantages	<ul style="list-style-type: none"> ■ Ready to mix, pre-proportioned kit. ■ Moisture-tolerant. ■ Corrosion and impact resistant. ■ Stress and chemical resistant. ■ Long working time. ■ High vibration resistance. ■ Fast strength gain. ■ Low peak exothermic system for large pours. ■ High effective bearing area. ■ Excellent flowability. ■ USDA certifiable for incidental food contact.
Packaging	<p>0.5 ft³ kit: Contains 0.9 gal. epoxy (Component A and Component B in a 5 gal. pail separated with a topliner), and 50 lbs. aggregate (Component C) in a multi-wall bag.</p> <p>1.5 ft³ kit: Contains 2.7 gal. epoxy (Component A in a 5 gal. pail and Component B in a 2 gal. pail) and 150 lbs. aggregate (Component C) in three 50 lb. multi-wall bags.</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°-85°F (18°-29°C) before using. Component C must be kept dry.		
Color	Concrete gray		
Consistency	Flowable		
Application Life	Approximately 90 minutes		
Tensile Properties (ASTM C-307) 7 day Tensile Strength	2,300 psi (15.8 MPa)		
Flexural Properties (ASTM C-580)			
7 day Flexural Strength (Modulus of Rupture)	4,000 psi (27.6 MPa)		
Tangent Modulus of Elasticity	1.30 x 10 ⁶ psi (8,963 MPa)		
Water Absorption (ASTM C-413) 7 day (2-hour boil)	0.04%		
Bond Strength (ASTM C-882 modified)			
7 day Bond Strength to Concrete	4,200 psi (29.0 MPa)		
Bond Strength to Steel	3,800 psi (26.2 MPa)		
Coefficient of Thermal Expansion (ASTM C-531)	24.5 x 10 ⁻⁶ in./in./°F (13.7x10 ⁻⁶ mm/mm/°C)		
Thermal Compatibility (ASTM C-884)	passes test		
Effective Bearing Area¹	>95%		
Compressive Properties (ASTM C-579B): Compressive Strength, psi (MPa)			
	40°F* (4°C)	73°F* (23°C)	90°F* (32°C)
8 hour	-	-	5,500 (37.9)
16 hour	-	9,600 (66.2)	9,800 (67.6)
1 day	-	12,200 (84.1)	11,500 (79.3)
3 day	4,800 (33.1)	14,000 (96.6)	14,000 (96.6)
7 day	13,700 (94.5)	14,900 (102.8)	14,800 (102.1)
14 day	13,900 (95.9)	15,000 (103.4)	15,200 (104.8)
28 day	13,900 (95.9)	15,200 (104.8)	15,600 (107.6)

* Material cured and tested at the temperatures indicated.

¹ Percent final surface area of grout in contact with bearing plate

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Construction



How to Use

Surface Preparation	Substrate and baseplate contact area must be clean, sound, and free of standing water. Remove dust, laitance, oils, grease, curing compounds, waxes, impregnations, foreign particles, coatings and disintegrated materials by mechanical means (i.e., sandblasting, bush hammering). Sandblast metal baseplates to a commercial white finish for maximum adhesion. Apply grout immediately to prevent re-oxidizing. Concrete substrate must have reached its desired strength (3,000 psi minimum) and must be dimensionally stable.
Mixing	<p>0.5 ft³ kit: Pour the entire contents of Components 'A' & 'B' into an appropriate mixing vessel (e.g. 5 gal. bucket) and mix for 30 seconds with a 1/2 in. Jiffy mixing paddle (5 in. blade diameter) on a low-speed (400 - 600 rpm) 3/4 in. drive rotary drill, taking care not to entrain air during mixing. Do not over-mix. It is critical to the performance of the grout that there be no appreciable air bubbles in the resin. Slowly add the entire contents of Component 'C' and mix until uniformly blended (approx. 5 minutes).</p> <p>1.5 ft³ kit: Pour the entire contents of Components 'A' & 'B' into an appropriate mixing vessel (e.g. 5 gal. bucket) and mix for 30 seconds with a 1/2 in. Jiffy mixing paddle (5 in. blade diameter) on a low-speed (400 - 600 rpm) 3/4 in. drive rotary drill, taking care not to entrain air during mixing. Do not over-mix. It is critical to the performance of the grout that there be no appreciable air bubbles in the resin. Transfer the mixed resin to an appropriate mixing vessel. Slowly add the entire 3 bags of Component 'C' and mix until uniformly blended (approx. 5 minutes).</p>
Application	Pour the mixed grout into the prepared forms from one side only to eliminate air entrapment. Baseplate should have vent holes around periphery to prevent air pockets from developing. Maintain the liquid head to ensure intimate contact with the base plate. Plungers may be used to ease placement. Place sufficient epoxy adhesive grout in the forms to rise slightly above the underside of the base plate. Grout depth of 1 in. (25 mm) minimum required.
Tooling & Finishing	Forming: The flowable consistency of the epoxy adhesive grout system requires the use of forms to contain the material around the baseplates. In order to prevent leakage or seepage, completely seal all forms. Apply polyethylene film or wax to all forms to prevent adhesion of the grout. Prepare form work to maintain a 2 in. (50 mm) liquid head to facilitate placement. A grout box that can be attached to the form will enhance the grout flowability. Projected anchor bolts should be wrapped with neoprene foam rubber (or similar) to prevent grout from adhering to the bolts. The use of expansion joints is recommended on large pours to minimize the potential for cracking in the epoxy grout (maximum 3-4 ft. spacing in each direction).
Limitations	<ul style="list-style-type: none"> ■ Minimum substrate and ambient temperature is 40°F (4°C). ■ Do not thin. Addition of solvents will prevent proper cure. ■ Material is a vapor barrier after cure. ■ Minimum grout depth is 1 in. (25 mm). ■ Baseplate should be shielded from direct sunlight and rain for a minimum of 24 hours before epoxy grouting, and 48 hours after grouting. ■ Maximum grout depth is 4 in./lift (101 mm). ■ Component C must be kept dry. ■ Cold material may require chaining, rodding, and pushing during placement. ■ For proper seating, allow grout to rise above the bottom of the base plate. ■ Do not batch. Mix complete units. ■ Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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