

TECHNICAL DATA SHEET

DESCRIPTION

Sure Anchor J50 is a two component, 100% solids, moisture tolerant, high modulus epoxy gel adhesive that meets ASTM C881 and AASHTO M235.

USE

Sure Anchor J50 is ideal for anchoring bolts, dowels and reinforcing steel in concrete. It is also ideal for vertical and horizontal structural bonding and patching. Sure Anchor J50 may be used to seal cracks and set injection ports prior to injection grouting.

FEATURES

- High-strength structural adhesive
- Ideal for anchoring dowels, bolts, reinforcing steel and threaded rod
- Moisture tolerant
- Non-sag gel consistency
- Excellent adhesion

PROPERTIES

ASTM C881, AASHTO M235 Types I, II, IV, V Grade 3, Classes B & C

Mix ratio

1 part A to 1 part B by volume

Mixed color Gray

Consistency Non-sag gel

Gel Time 60 gm mass

40 minutes at 75°F (24°C)

Compressive Strength (ASTM D695)

10,500 psi (72.4 MPa) at 7 days

Concrete Bond Strength (ASTM C882)

2 days 2500 psi (17.2 MPa)

14 days 4400 psi (30.3 MPa)

Compressive Modulus (ASTM D695)

223,000 psi (1537.5 MPa)

Tensile Strength (ASTM D638)

8000 psi (55.1 MPa)

Shear Strength (ASTM D732)

3200 psi (22 MPa)

Flexural Strength (ASTM D790)

5400 psi (37.2 MPa)

Water Absorption (ASTM D570)

0.12%

Elongation (ASTM D638)

2.60%

Shrinkage (ASTM C883)

Passes

Thermal Compatibility (ASTM C884)

Passes

Tension Loads

(Pull-Out Tests with Threaded Rod)

Rod Diameter	Hole Diameter	Hole Depth	4000 psi (27 MPa)	5500 psi (38 MPa)
3/8" (1 cm)	7/16" (1.1 cm)	3-3/8" (8.6 cm)	8250 lbs. (3742 kg)	9200 lbs (4173 kg)
3/8" (1 cm)	7/16" (1.1 cm)	5-5/8" (14.3 cm)	11,360 lbs. (5153 kg)	11740 lbs (5325 kg)
1/2" (1.3 cm)	9/16" (1.4 cm)	4 1/2" (11.4 cm)	11,730 lbs. (5320 kg)	12920 lbs (5860 kg)
1/2" (1.3 cm)	9/16" (1.4 cm)	7 1/2" (19.0 cm)	17,010 lbs. (7716 kg)	19360 lbs (8782 kg)
5/8" (1.6 cm)	3/4" (1.9 cm)	5-5/8" (14.3 cm)	18,870 lbs. (8560 kg)	22940 lbs (10,405 kg)
5/8" (1.6 cm)	3/4" (1.9 cm)	9-3/8" (23.8 cm)	26,260 lbs (11911 kg)	30960 lbs (14,043 kg)
3/4" (1.9 cm)	7/8" (2.2 cm)	6 3/4" (17.1 cm)	25,870 lbs. (11734 kg)	29360 lbs (13,317 kg)
3/4" (1.9 cm)	7/8" (2.2 cm)	11 1/4" (28.6 cm)	34,340 lbs (15576 kg)	38360 lbs (17,400 kg)

VOC

Sure Anchor J50 has a VOC content of 0 g/L. Compliant with all Canadian and U.S. VOC regulations including Federal EPA, OTC, LADCO, SCAQMD & CARB.

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		Gallon/Ounce	Liter
307449	Cartridge	20 oz	600 ml
139888	Cartridge	50.7 oz	1500 ml
307447	Unit	1 gal	3.79
307448	Unit	2 gal	7.57
307451	Unit	10 gal	37.85

STORAGE

The material should be stored at 40°-95°F (5°-35°C). Shelf life of properly stored, unopened containers is 24 months.

Surface Preparation:

Surface to be bonded must be clean and sound. Remove dust, dirt, grease, laitance, curing compounds and other foreign matter by sandblasting, mechanical abrasion or hydro blasting. For drilled holes, clean with a nylon bristle brush. Remove all water and dust with clean compressed air prior to installation. Air and surface temperature must be 40°F (5°C) or above.

Mixing:

Condition material to 65°- 85°F (18°- 29°C) before using. Premix each component, then mix equal volumes of Part A and Part B for 3 minutes with a low speed drill using a jiffy mixer or paddle. Mix only what can be used during the pot life.

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General Application Procedure:

Step 1: Drill hole in concrete using a rotary-percussion power drill (rotary-hammer drill) and a carbide-tipped SDS or SDS-Plus type drill bit complying with ANSI B212.15-1994, to the diameter and embedment depth adhering to minimum spacing, minimum edge distance, and minimum concrete member thickness.

Caution: Wear suitable eye and skin protection. Avoid inhalation of dust during drilling and debris removal.

Step 2: Blow out hole using oil-free compressed air at a minimum of 70 psi with a nozzle. While blowing air, insert the nozzle into the hole until in contact with the bottom for not less than one second, and then withdraw.

Step 3: Insert a cleaning brush for the proper drill hole diameter. Thrust the brush to the bottom of the borehole while twisting. Once the brush is in contact with the bottom of the hole, turn the brush one-half revolution, and then quickly withdraw the brush with a vigorous, twisting pull. Repeat.

Step 4: Repeat blow out of hole with air as per Step 2 above. Concrete shall be dry before injection of adhesive.

Step 5: When using cartridge insert the cartridge into the extrusion tool, and attach the supplied mixing nozzle to the cartridge. Do not modify mixing nozzle. Prior to injection, dispense material through the mixing nozzle in a continuous bead until a uniform light gray color is achieved. Initial dispensed material will be darker gray in color and should not be used for installation. After uniform light gray color is achieved, insert the end of the mixing nozzle into the borehole until in contact with the bottom. Then, dispense the adhesive while slowly withdrawing the nozzle until borehole is approximately 1/2 - 2/3 full, and then withdraw the mixing nozzle. Keep the nozzle attached on partially used cartridges. A new mixing nozzle must be used if the gel time has been exceeded between injections.

Step 6: Mark the anchor rod with the required embedment depth. Insert the clean and oil-free anchor rod into the adhesive in the borehole, turning it slowly as it is pushed downward until contact with the bottom of the borehole. Make sure the hole is completely filled with adhesive and that no gaps appear between the anchor rod and borehole.

Step 7: Adjust the alignment of the anchor in the hole immediately. Do not disturb it between the Gel Time and the Minimum Cure Time. Do not torque or apply load to the anchor until the Recommended Cure Time.

Recommended Cure Times

Minimum cure time required before the design or allowable load may be applied. Anchors are to be undisturbed during the minimum cure time. Cure time is the time required before the epoxy reaches ultimate strength.

Substrate Temp.		Minimum Cure Time	Cure Time
Fahrenheit	Celsius		
65	18	24 hours	48 hours
70	21	12 hours	36 hours
80	27	6 hours	24 hours
100	38	4 hours	12 hours

CLEAN UP

Tools and Equipment: Clean before the epoxy sets. Use xylene or Dayton Superior Citrus Cleaner J48.

LIMITATIONS

FOR PROFESSIONAL USE ONLY

Do not thin with solvents. Surface and ambient temperature must be 40°F (5°C) or above. Do not expose stored product to cold or freezing temperature (below 35°F, 2°C) for any length of time.

PRECAUTIONS

READ SDS PRIOR TO USING PRODUCT

- Component A – Irritant
- Component B – Corrosive
- Product is a strong sensitizer
- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements
- Cured epoxy resins are innocuous

MANUFACTURER

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WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.