

TECHNICAL DATA SHEET

DESCRIPTION

Pro-Poxy 500 is a two component non-sag high performance, 100% solids epoxy anchoring system that can be used with threaded rod and reinforcing bar in both cracked and uncracked concrete.

Pro-Poxy 500 has been tested to ICC-ES AC308, ESR-3959 and is certified to NSF/ANSI Standard 61 by IAPMO R&T. Pro-Poxy 500 is approved for use to resist static, wind or earthquake in seismic design categories A through F.

USE

Pro-Poxy 500 is ideal for anchoring dowels, bolts, threaded rod, pins and reinforcement steel in cracked and uncracked concrete as well as other substrates including stone and solid rock.

FEATURES

- Anchoring threaded rod and reinforcing bar (rebar) into either cracked or uncracked concrete
- For use in vertical down, horizontal, upwardly inclined and overhead installations
- Installs in temperatures between 40°F and 104°F (5°C and 40°C).
- Low VOC, with virtually no odor, styrene free
- Moisture tolerant



PROPERTIES

Compressive Yield Strength ASTM D695
7 days 13,810 psi (95.2 MPa)

Tensile Strength ASTM D638
7 days 3,325 psi (22.9 MPa)

Tensile Elongation ASTM D638
7 days 5.9%

Tensile Modulus ASTM D638
7 days 798,000 psi (5502.0 MPa)

Flexural Strength ASTM D790
7 days 11,750 psi (81.0 MPa)

Heat Deflection Temperature ASTM D648
7 days 120°F (48.9°C)

Volatile Organic Compounds (VOC's) D2369, 4.5 g/l

VOC

Pro-Poxy 500 has a VOC content of 4.5 g/L. Compliant with all Canadian and U.S. VOC regulations including Federal EPA, OTC, LADCO, SCAQMD & CARB.

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		Ounce	Liters
146220	Cartridge	20	600 ml

STORAGE

The material should be stored between 50°F (10°C) and 77°F (25°C). Shelf life of properly stored, unopened cartridges is 24 months from the date of manufacture.

APPLICATION

Surface Preparation:

Concrete must be clean and sound. Remove all dust, dirt, grease, oils, curing compounds, laitance, paint, sealers, bond breakers, loose concrete or any other matter that may affect adhesion. Drilled holes must be cleaned with a wire brush. Blow out the hole with clean, oil-free compressed air from the bottom up. Do not install over frost or ice.

Placement:

Before commencing installation ensure the installer is equipped with appropriate personal protection equipment, SDS Hammer Drill, Air Lance, Hole Cleaning Brush, good quality dispensing tool – either manual or power operated, adhesive cartridge with mixing nozzle, and extension tube with resin stopper.

NOTE: Check the expiration date on the cartridge (do not use expired material) and that the cartridge has been stored in its original packaging, the correct way up, in cool conditions (50°F to 77°F) out of direct sunlight. Horizontal and Vertical Anchoring.

1. Using the SDS Hammer Drill in rotary hammer mode for drilling, with a carbide tipped drill bit conforming to ANSI B212.15-1994 of the appropriate size, drill the hole to the specified hole diameter and depth.

2. Select the correct Air Lance, insert to the bottom of the hole and depress the trigger for 2 seconds. The compressed air must be clean – free from water and oil – and at a minimum pressure of 90 psi (6 bar) blow out the hole twice.

3. Select the correct size Hole Cleaning Brush. Ensure that the brush is in good condition and the correct diameter.

Insert the brush to the bottom of the hole, using a brush extension if needed to reach the bottom of the hole and withdraw with a twisting motion. There should be positive interaction between the steel bristles of the brush and the sides of the drilled hole. Perform the brushing operation twice.

4. Repeat 2 (blowing operation) twice.

TECHNICAL DATA SHEET

5. Repeat 3 (brushing operation) twice.
6. Repeat 2 (blowing operation) twice.
7. Select the appropriate static mixer nozzle, checking that the mixing elements are present and correct (do not modify the mixer). Attach mixer nozzle to the cartridge. Check the Dispensing Tool is in good working order. Place the cartridge into the dispensing tool.

Note: The QH nozzle is in two sections. One section contains the mixing elements and the other section is an extension piece. Connect the extension piece to the mixing section by pushing the two sections firmly together until a positive engagement is felt.

Note: PRO-POXY 500 may only be installed between concrete temperatures of 40°F to 104°F for horizontal to downward installation direction, and 50°F to 104°F for horizontal to overhead direction. The product must be conditioned to a minimum of 50°F.

8. Extrude some resin to waste until an even-colored mixture is extruded, The cartridge is now ready for use.
9. Attach an extension tube with resin stopper (if required) to the end of the mixing nozzle with a push fit. (The extension tubes may be pushed into the resin stoppers and are held in place with a coarse internal thread).
10. Insert the mixing nozzle to the bottom of the hole. Extrude the resin and slowly withdraw the nozzle from the hole. Ensure no air voids are created as the nozzle is withdrawn. Inject resin until the hole is approximately $\frac{3}{4}$ full and remove the nozzle from the hole.
11. Select the steel anchor element ensuring it is free from oil or other contaminants, and mark with the required embedment depth. Insert the steel element into the hole using a back and forth twisting motion to ensure complete cover, until it reaches the bottom of the hole. Excess resin will be expelled from the hole evenly around the steel element and there shall be no gaps between the anchor element and the wall of the drilled hole.
12. Clean any excess resin from around the mouth of the hole.
13. Do not disturb the anchor until at least the minimum cure time has elapsed.
14. Position the fixture and tighten the anchor to the appropriate installation torque. Do not over-torque the anchor as this could adversely affect its performance.

Overhead Anchoring Installation

1. Using the SDS Hammer Drill in rotary hammer mode for drilling, with a carbide tipped drill bit conforming to ANSI B212.15-1994 of the appropriate size, drill the hole to the specified hole diameter and depth.
2. Select the correct Air Lance, insert to the bottom of the hole and depress the trigger for 2 seconds. The compressed air must be clean – free from water and oil – and at a minimum pressure of 90 psi (6 bar) blow out the hole twice.
3. Select the correct size Hole Cleaning Brush. Ensure that the brush is in good condition and the correct diameter. Insert the brush to the bottom of the hole, using a brush extension if needed to reach the bottom of the hole, and withdraw with a twisting motion. There should be positive interaction between the steel bristles of the brush and the sides of the drilled hole.
4. Repeat 2 (blowing operation) twice.
5. Repeat 3 (brushing operation) twice.
6. Repeat 2 (blowing operation) twice.
7. Select the appropriate static mixer nozzle checking that the mixing elements are present and correct (do not modify the mixer). Attach mixer nozzle to the cartridge. Check the Dispensing Tool is in good working order. Place the cartridge into the dispensing tool.

Note: The QH nozzle is in two sections. One section contains the mixing elements and the other section is an extension piece. Connect the extension piece to the mixing section by pushing the two sections firmly together until a positive engagement is felt.

Note: PRO-POXY 500 may only be installed between concrete Temperatures of 50°F and 104°F for overhead and upwardly inclined installations. The product must be Conditioned to a minimum of 50°F.

8. Extrude some resin to waste until an even-colored mixture is extruded, The cartridge is now ready for use.
9. Attach an extension tube with resin stopper (if required) to the end of the mixing nozzle with a push fit. (The extension tubes may be pushed into the resin stoppers and are held in place with a coarse internal thread).
10. Insert the mixing nozzle to the bottom of the hole. Extrude the resin and slowly withdraw the nozzle from the hole. Ensure no air voids are created as the nozzle is withdrawn. Inject resin until the hole is approximately $\frac{3}{4}$ full and remove the nozzle from the hole.

TECHNICAL DATA SHEET

11. Select the steel anchor element ensuring it is free from oil or other contaminants, and mark with the required embedment depth. Insert the steel element into the hole using a back and forth twisting motion to ensure complete cover, until it reaches the bottom of the hole. Excess resin will be expelled from the hole evenly around the steel element and there shall be no gaps between the anchor element and the wall of the drilled hole.

12. Clean any excess resin from around the mouth of the hole.

13. Do not disturb the anchor until at least the minimum cure time has elapsed. Refer to the Working and Load Timetable to determine the appropriate cure time.

14. Position the fixture and tighten the anchor to the appropriate installation torque. Do not over-torque the anchor as this could adversely affect its performance.

CLEAN UP

Clean up with full strength Dayton Citrus Cleaner J48 or Xylene. Cured, hardened Pro-Poxy 500 can only be removed mechanically. Do not let Pro-Poxy 500 set up on surfaces that are not to be bonded.

Recommended Gel & Cure Times

Gel time per ASTM C881. Gel time is the interval between the beginning of mixing and the formation of the gelatinous mass. Minimum cure time required before the design or allowable load may be applied. Anchors are to be undisturbed during the minimum cure time.

Substrate Temperature (°C)	Substrate Temperature (°F)	Gel Time	Cure Time
4 to 9	40 to 49	20 mins	24 hours
10 to 15	50 to 59	20 mins	12 hours
10 to 22	59 to 72	15 mins	8 hours
22 to 25	72 to 77	11 mins	7 hours
25 to 30	77 to 86	8 mins	6 hours
30 to 35	86 to 95	6 mins	5 hours
35 to 40	95 to 104	4 mins	4 hours
40	104	3 mins	3 hours

Accessory Items

PRODUCT CODE	DESCRIPTION	SIZE
146313	HOLE CLEANING BRUSH	S14H/F
146314	HOLE CLEANING BRUSH	S16H/F
146315	HOLE CLEANING BRUSH	S22H/F
146222	HOLE CLEANING BRUSH	S24H/F
146223	HOLE CLEANING BRUSH	S27H/F
146224	HOLE CLEANING BRUSH	S31H/F
146225	HOLE CLEANING BRUSH	S35H/F
146226	HOLE CLEANING BRUSH	S38H/F
146227	HOLE CLEANING BRUSH	S43H/F
146228	RESIN STOPPER	RS18
146229	RESIN STOPPER	RS22
146310	RESIN STOPPER	RS30
146311	EXTENSION TUBING	3/8" DIA.
146312	EXTENSION TUBING	9/16" DIA.
141487	MANUAL GUN	T600
140952	PNEUMATIC GUN	AT600

LIMITATIONS

FOR PROFESSIONAL USE ONLY

All surfaces that Pro-Poxy 500 will be installed on must be free of frost and ice. Do not thin or mix the Pro-Poxy 500 with any other material, solvent, thinner or other bonding agent or epoxy. Do not use Pro-Poxy 500 that has exceeded its shelf life as physical properties will be adversely affected. Minimum age of concrete must be 21-28 days from date of placement depending on curing and drying conditions.

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.

TECHNICAL DATA SHEET

- 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

MANUFACTURER

Dayton Superior Corporation
1125 Byers Road
Miamisburg, OH 45342
Customer Service: 888-977-9600
Technical Services: 877-266-7732
Website: www.daytonsuperior.com

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.