

## TECHNICAL DATA SHEET

### DESCRIPTION

ProAnchor Elite is two component, moisture tolerant, 100% solids, high modulus epoxy gel adhesive approved for use in cartridges and in bulk for anchoring in cracked and un-cracked concrete and internally threaded inserts in un-cracked concrete. Meets requirements of ACI 355.4 and ICC-ES AC308 per IAPMO ER-690.

### USE

ProAnchor Elite is ideal for anchoring bolts, dowels, and reinforcing steel in concrete. It is also ideal for vertical and horizontal structural bonding and patching. It may also 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
- Fast-setting
- Suitable for dry, water saturated and water-filled holes
- Qualified for Seismic Design Categories A through F.
- Made in the USA in accordance with CFR 49 section 50101.

### PROPERTIES

See Appendix A.  
For a complete list of properties, tools, and accessories, refer to IAPMO ER-690

### APPLICABLE STANDARDS

ASTM C881, AASHTO M235: Types I, II, IV & V; Grade 3; Classes A, B & C\*

\*Except for gel time due to fast set

Multiple state DOT approvals

IBC/IRC

Water System Component, NSF 61 Approved

Acceptable for use in USDA inspected facilities

### VOC

ProAnchor Elite 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	Packaging	Size oz	Milliliters/Liter
100861	Cartridge	9	266
100862	Cartridge	22	650
100863	Cartridge	53	1567
100864	Pails	10 gal	37.8

### STORAGE

The material should be stored at 40°-95°F (5°-35°C). Use prior to the "best used by date" on product label. Do not expose stored product to cold or freezing temperature below 35°F (2°C) for any length of time

### Surface Preparation:

Ambient and substrate temperature conditions:

43° and 110°F (6° and 43°C) for structural applications per UES 690.

38° and 125°F (3° and 52°C) for transportation infrastructure applications to AASHTO M235 & ASTM C881.

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 bristle brush.

Remove all water and dust with clean compressed air prior to installation. Air and surface temperature must be 38°F (3°C) or above.

### Mixing

Condition material to 65°- 85°F (18°- 29°C) before using.

Cartridges:

Remove the protective cap and "pre-purge" the cartridge before putting on the static mixer to ensure uniform mixing. Screw on the static mixing nozzle and dispense epoxy until the product is a uniform gray with no streaking.

Bulk:

Premix each component, then mix equal volumes of Part A and Part B for 3 minutes with a low speed drill, a jiffy mixer or paddle. Mix only what can be used during the pot life. For bulk dispensing equipment for structural applications, refer to UES 690 Table 5. Under normal operation, the bulk pump must be capable of dispensing the individual components at a 1:1 mix ratio by volume with a tolerance of ± 2%.

**TECHNICAL DATA SHEET****Placement:**

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.

**Cure Time**

Working Time & Full Cure Time per UES 690. Base material and ambient air temperature shall be 43° to 110° F (6° to 43° C) during installation. When ambient or base material falls below 70° F (21° C) the adhesive shall be conditioned to 70° to 75° F (21° to 24° C) prior to use.

Concrete Temperatures		Working Time	Full Cure
Fahrenheit	Celsius		
43	6	45 minutes	144 hours
50	10	35 minutes	72 hours
75	24	16 minutes	7 hours
90	32	12 minutes	4 hours
110	43	3 minutes	2 hours

**Accessory Items**

Stainless steel brushes

See Appendix B

**CLEAN UP**

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

**LIMITATIONS****FOR PROFESSIONAL USE ONLY**

Building Code Requirements for Structural Concrete (ACI 318-11 /ACI 318-14) requires the Installer to be certified where adhesive anchors are to be installed in horizontal or overhead installations.

Do not thin with solvents

Surface and ambient temperature must be 38°F (3°C) or above

Do not expose stored product to cold or freezing temperature below 35°F (2°C) for any length of time

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**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**

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

## TECHNICAL DATA SHEET

**Appendix A**

 TABLE 1: ProAnchor Elite Performance to ASTM C881-15<sup>1,2,3</sup>

Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature				
				Class A	Class B	Optional	Optional	Class C
				38 °F (3 °C)	50 °F (10 °C)	75 °F (24 °C)	110 °F (43 °C)	125 °F (52 °C)
Gel Time – 60 Gram Mass <sup>4</sup>	----	C881	Min	14	13	10	2 <sup>4</sup>	2 <sup>4</sup>
Consistency or Viscosity			----	Non-sag				
Compressive Yield Strength	7 day	D695	PSI (MPa)	12,980 (89.5)	13,280 (91.6)	14,480 (99.8)	14,500 (100.0)	13,430 (92.6)
Compressive Modulus			PSI (MPa)	534,900 (3,688)	506,100 (3,489)	475,900 (3,281)	599,600 (4,134)	585,600 (4,038)
Bond Strength Hardened to Hardened Concrete	2 day	C882	PSI (MPa)	2,700 (18.6)	2,770 (19.1)	2,780 (19.2)	3,150 (21.7)	2,050 (14.1)
	14 Day		PSI (MPa)	2,860 (19.7)	2,950 (20.3)	3,110 (21.4)	3,050 (21.0)	2,080 (14.3)
Bond Strength Fresh to Hardened Concrete			PSI (MPa)	2,730 (18.8)				
Tensile Strength <sup>5</sup>	7 day	D638	PSI (MPa)	6,780 (46.7)				
Tensile Elongation <sup>5</sup>			%	1.0				
Heat Deflection Temperature		D648	°F (°C)	148 (64)				
Water Absorption	14 day	D570	%	0.02				
Linear Coefficient of Shrinkage	----	D2566	%	0.0003				

1. Product testing results based on representative lot(s). Average results will vary according to the tolerances of the given property.

2. Full cure time is listed above to obtain the given properties for each product characteristic.

3. Results may vary due to environmental factors such as temperature, moisture and type of substrate.

4. Gel time may be lower than the minimum required for ASTM C881.

5. Optional testing for ASTM C881 Grade 3.

**Appendix B**

Tools	
Brushes	
100865	Brush - 6 IN - Drill Size 7/16"
100866	Brush - 6 IN - Drill Size 1/2"
100867	Brush - 6 IN - Drill Size 9/16"
100868	Brush - 6 IN - Drill Size 5/8"

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100869	Brush - 6 IN - Drill Size 3/4"
100871	Brush - 6 IN - Drill Size 7/8"
100872	Brush - 9 IN - Drill Size 1"
100873	Brush - 9 IN - Drill Size 1-1/8"
100874	Brush - 9 IN - Drill Size 1-3/8"
100875	Brush - 9 IN - Drill Size 1-1/2"
100876	SDS Brush Adapter
100877	Brush Extension
<b>Miscellaneous</b>	
100878	Square Mixing Nozzle w/Hanger – 10"x1/2"x7/16"
100879	HF Mixing Nozzle w/ 8MM Ext Tube - 15.75"
100881	8 MM Extension Tube for 15.75" HF Mixing Nozzle
100882	9/16" Diameter Nozzle Extension - 36"
100883	Retention Wedge
<b>Dispensing Tools</b>	
100884	Manual Heavy Duty Dispensing Tool -- 9 oz
100885	Manual Heavy Duty Dispensing Tool - 3:1 13/20 oz
100886	Air Tool - 3:1 20 oz
100887	Pneumatic Dispensing Tool - 3:1 20 oz
100888	Battery Dispensing Tool - 3:1 20 oz
100889	Manual Heavy Duty Dispensing Tool - 22 oz
100891	Pneumatic Dispensing Tool - 22 oz
100892	Battery Dispensing Tool - 22/16 oz w/ 18V charger
100893	Pneumatic Dispensing Tool - 53 oz
<b>Piston Plugs</b>	
100895	Piston Plug 7/16" - Black w/ 8" polypropylene tube (10 pk)
100896	Piston Plug 7/16" - Black (10 pk)
100897	Piston Plug 9/16" - Blue (10 pk)
100898	Piston Plug 5/8" - Red (10 pk)
100899	Piston Plug 3/4" - Yellow (10 pk)
100901	Piston Plug 7/8" - Green (10 pk)
100902	Piston Plug 1" - Black (10 pk)
100903	Piston Plug 1-1/8" - Orange (5 pk)
100904	Piston Plug 1-3/8" - Brown (5 pk)
100905	Piston Plug 1-1/2" - Gray (5 pk)