

## TECHNICAL DATA SHEET

### DESCRIPTION

All Weather J51 AW is a two component 100% solid, moisture tolerant, all weather epoxy acrylate hybrid anchoring gel that meets ASTM C 881 specification requirements. All Weather J51 AW is formulated to set up at room temperatures and down to temperatures of -15°F (-26°C).

### USE

All Weather J51 AW is ideal for anchoring dowels, bolts, threaded rod, pins and reinforcement steel in concrete. All Weather J51 AW can also be used in cooler and freezer applications or anywhere low temperature installations are required.

### FEATURES

- All weather and temperature installation
- Ideal for cold weather installations
- Moisture tolerant
- High structural strength adhesive
- Rapid cure & gel time at room temperatures
- Styrene Free
- VOC Compliant-100% solids
- Non-sag gel consistency for horizontal and vertical installations
- Easy dispensing from dual cartridges
- High bond and adhesion

### PROPERTIES

Meets USDA specifications for use in incidental food contact. V.O.C. compliant.

Complies with ASTM C 881 and AASHTO M-235: Types I, II, IV, V\*, classes A, B & C. Grade 3 (\*with exception of gel time)  
Passed- ASTM E-1512 (Sec.7.1 & 7.5) Elevated temperature creep test.

#### Laboratory test data

Mix Ratio (A to B by volume) - 10:1

Consistency - No flow-gel

Gel time (60 GM MASS @ 73°F) - 7.5 Min.

ASTM D 695 - Compressive Strength 10,000 PSI  
(68.95 MPa)

ASTM D 695 - Compressive Modulus 260,000 PSI  
(1,793 MPa)

ASTM D 570 - Water Absorption - 0.08%

ASTM D 648 – Heat Deflection temp. - 144°F (62.2 C)

ASTM C 882 – Bond Strength (2-days) - 2,800 PSI  
(19.31 MPa)

ASTM C 882 – Bond Strength (14-days) - 3,200 PSI  
(22.06 MPa)

ASTM D 638 – Elongation break 1.3%  
ASTM D 1875 – Density (lb/gal.) Part-A 13.2 lb/gal.  
(1.58 kg/L)  
ASTM D 1875 – Density (lb/gal.) Part-B 14.1 lb/gal.  
(1.69 kg/L)

### VOC

All Weather J51 AW has a VOC content of 0 g/L . Compliant with all US VOC regulations including Federal EPA, OTC, LADCO, SCAQMD & CARB.

### ESTIMATING GUIDE

Rebar			
Bolt Diameter Rebar Size	Hole Diameter	Hole Depth	Anchors per 28 oz Cartridge Rebar/Dowel
3/8" -#3 (1 cm)	1/2" (1.3 cm)	4" (10.2 cm)	104
1/2" -#4 (1.3 cm)	5/8" (1.6 cm)	5" (12.7 cm)	65
5/8" -#5 (1.6 cm)	3/4" (1.9 cm)	6" (15.2 cm)	45
3/4" -#6 (1.9 cm)	7/8" (2.2 cm)	7" (17.8 cm)	31
7/8" -#7 (2.2 cm)	1" (2.5 cm)	8" (20.3 cm)	23
1" -#8 (2.5 cm)	1-1/8" (2.8 cm)	9" (22.9 cm)	20
1-1/4" -#10 (3.2 cm)	1-1/2" (3.8 cm)	9" (22.9 cm)	9

Threaded Rod			
Bolt Diameter Rebar Size	Hole Diameter	Hole Depth	Anchors per 28 oz Cartridge Rebar/Dowel
3/8" -#3 (1 cm)	7/16" (1.1 cm)	4" (10.2 cm)	96
1/2" -#4 (1.3 cm)	9/16" (1.42 cm)	5" (12.7 cm)	55
5/8" -#5 (1.6 cm)	3/4" (1.9 cm)	6" (15.2 cm)	24
3/4" -#6 (1.9 cm)	7/8" (2.2 cm)	7" (17.8 cm)	16
7/8" -#7 (2.2 cm)	1" (2.5 cm)	8" (20.3 cm)	12
1" -#8 (2.5 cm)	1-1/8" (2.8 cm)	9" (22.9 cm)	9
1-1/4" -#10 (3.2 cm)	1-3/8" (3.2 cm)	9" (22.9 cm)	7

The above yield rates are theoretical and do not account for loss or waste.

### PACKAGING

ITEM #	PACKAGE	SIZE (Liters)
308482	Unicartridge	275 ml
139886	Cartridge	825 ml

# All Weather J51 AW

Epoxy Gel Anchor

## STORAGE

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

## 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 nylon brush. Blow out the hole with clean, oil- free compressed air from the bottom up. Remove all standing or ponded water prior to installation of All Weather J51 AW. Do not install over frost or ice.

**Test before placement:** It is advisable to test a small portion of the All Weather J51 AW for gel and set times at the temperature for intended use before overall installation. Make sure that the All Weather J51 AW will set at the intended temperatures.

**Placement:** Condition material to 65°- 85°F (18°- 29°C) before using. Remove the "D" cartridge plugs from the extrusion throat end of the cartridge. Place the retaining nut over the small end of the static mixing tube. Securely hand tighten the retaining nut onto the cartridge making sure that there is no slack in the nut, otherwise leaking will occur. Place the assembled cartridge into either a manual or pneumatic gun.

Pneumatic guns are recommended during temperatures below 40°F (5°C) and for large jobs where high production is required. Start installation by extruding material into a waste pail until a smooth uniform color without streaking has been achieved. Discard the first material that is extruded from the end of the nozzle until the uniform streak- free color is achieved. Off color or streaking will result in an off ratio mix, and the All Weather J51 AW will not set properly or develop maximum strength. Dispense the All Weather J51 AW using constant and even pressure. Start dispensing by placing the static mixing nozzle to the bottom of the hole pulling the mixing nozzle out slowly filling the hole on the way out. Fill to approximately ½ full. Place dowel, rod, rebar, pin, etc. into the back of the hole, rotating the rod slowly, and displacing epoxy as it is inserted.

Whenever the dispensing is interrupted or otherwise stopped for more than 15 minutes, recheck the extruded All Weather J51 AW for uniform streak-free color before use. Always establish uniform non-streak color before use to verify proper mixing.

## CURE TIME

Substrate Temp.	Minimum	
	Gel Time	Cure Time
100°F / 38°C	5 min.	25 min.
70°F / 21°C	7 min.	35 min.
0°F / -18°C	4 hrs.	24 hrs.
-15°F / -26°C	8 hrs.	36 hrs.

## CLEAN UP

Clean up with full strength Dayton Citrus Cleaner J48 or Xylene. Cured, hardened All Weather J51 AW can only be removed mechanically. Do not let All Weather J51 AW set up on surfaces that are not to be bonded.

## LIMITATIONS FOR PROFESSIONAL USE ONLY

All surfaces that All Weather J51 AW will be installed on must be free of frost and ice.

Concrete must be a minimum of 7 days old.

Do not thin or mix the All Weather J51 AW with any other material, solvent, thinner or other bonding agent or epoxy.

Do not use All Weather J51 AW that has exceeded its shelf life as physical properties will be adversely affected.

Minimum age of concrete must be 3-7 days, depending on curing and drying conditions

## PRECAUTIONS READ MSDS 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

TECHNICAL DATA SHEET

CONTINUED

**MANUFACTURER**

Dayton Superior Corporation  
1125 Byers Road  
Miamisburg, OH 45342  
Customer Service: 888-977-9600  
Technical Services: 866-329-8724  
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.