



# ENGINEERED POLYMERS, INCORPORATED

## *ReactAmine<sup>®</sup> Aliphatic Joint Sealant*

CODE: *AJS*

### PRODUCT DESCRIPTION:

*ReactAmine<sup>®</sup> Aliphatic Joint Sealant (AJS)* is a two component 100% solid, aliphatic, silicone polyurea based joint sealant. *AJS* is a self-leveling joint sealant designed to protect interior horizontal concrete expansion and control joints from spalling, chipping, and breakdown. This elastomer displays fast cure times and excellent adhesion to concrete. *JS* can be applied at temperatures ranging -30° F to 250°F. This polyurea elastomer displays excellent chemical resistance, water insensitivity, and thermal stability at high and low temperatures. *AJS* may also be used under traditional floor coatings (such as epoxies, polyureas and polyurethanes) or tiles to smooth the joints and provide protection from cracking and sinking caused by non-elastomeric joint sealants. *AJS* has outstanding color stability.

### PRIMARY APPLICATIONS:

*AJS* was designed to protect against the abuse to concrete joints caused by heavy load transfers from such items as forklifts, steel-wheeled carts and trash dumpsters. Some typical uses include:

- Concrete Control / Expansion Joints
- Concrete Spall Repairs
- Cold Storage Facilities
- Merchandise Distribution Centers
- Home Improvement Stores
- Bridge Headers
- Warehouse Floors
- D.O.T. Pothole Road Repair
- U.S.D.A. and F.D.A. Acceptable

### TYPICAL PHYSICAL PROPERTIES:

**1:1**

Tensile Strength (PSI)	ASTM D412	1250
Elongation (%)	ASTM D412	450
100% Modulus	ASTM D412	1100
Tear Strength (PLI)	ASTM D412	350
Hardness (Shore A)	ASTM D2240	85A*
Flexibility (1/8 " Mandrel)	ASTM D1737	Pass
Flashpoint (°F)	ASTM	>200
	Pensky-Martin	
Taber Abrasion (mg loss)	ASTM D4060	20.5
CS18 WHEEL		
1 kg per 1000 cycles		
Viscosity B Side	CPS	350
Viscosity A Side	CPS	650

\* Range of durometer can be adjusted.

### TYPICAL PROCESSING PROPERTIES:

Gel Time	minutes	2
Tack Free Time	minutes	10
Open to Industrial Traffic	minutes	30

### APPLICATION EQUIPMENT:

This material may be applied using a plural component pump (1:1 by Volume), handmixing, or by plural component cartridges. This proportioning unit must be capable of supplying the correct pressure and heat for the required hose length on a consistent basis. This characteristic is mandatory to apply this elastomer in a consistent, efficient manner. When handmixing, care must be taken to mix and pour quickly as the *AJS* is designed to gel quickly. For small jobs, the *AJS* cartridges may be utilized.

### AVAILABLE COLORS:

- Custom tinting on request



An Amber Chemical Group Company  
[www.amberchemical.com](http://www.amberchemical.com)

**INSTALLATION RECOMMENDATIONS:**

*ReactAmine® AJS* adheres well to sound concrete substrates. All surfaces should be free of moisture, loose particles and debris. When utilizing a plural component pump. It is advisable to utilize a 3/8" x 32 element-mixing wand to insure proper backpressure and mixing characteristics. Chloride, moisture, and pH levels should be checked prior to application.

**New Concrete**

**Interior Control Joints/Expansion Joints –** The concrete should be allowed to cure for a minimum of 60 to 90 days. Any moisture present in the joint should be eliminated prior to installation. Using a diamond blade saw, saw the joint vertically to 90 ° angles to a minimum depth of 1 inch. The joint should be widened slightly to ensure adhesion to freshly opened concrete. Care should be taken not to adversely affect adhesion by “burnishing” the sides of the joint with a grinder. After sawing or grinding, care should be taken that minimal amounts of dust and debris are left over in the joint. The joint should be vacuumed using a common “shop-vac” to remove as much dust and debris as possible. In some cases, closed cell joint backer can be used to prevent “sinkers” or continuously running material. It should be noted that the use of joint backer does not provide optimum joint protection. It may be necessary to stop “sinkers” by making several passes over the joint and allowing the material to cure in between passes. **AJS** should be placed in the joint full depth, overfilled, and allowed to cure for a minimum of ten minutes before shaving level with the concrete.

**Aged Concrete**

**Interior Control Joints/Expansion Joints –** Remove all existing joint sealer and joint backer. Any moisture present in the joint should be eliminated prior to installation. Using a diamond blade saw, saw the joint vertically to 90 ° angles to a minimum depth of 1 inch. The joint should be widened slightly to ensure adhesion to freshly opened concrete. Care should be taken not to adversely affect adhesion by “burnishing” the sides of the joint with a grinder. After sawing or

amounts of dust and debris are left over in the joint. The joint should be vacuumed using a common “shop-vac” to remove as much dust and debris as possible. In some cases, closed cell joint backer can be used to prevent “sinkers” or continuously running material. It should be noted that the use of joint backer does not provide optimum joint protection. It may be necessary to stop “sinkers” by making several passes over the joint and allowing the material to cure in between passes. **AJS** should be placed in the joint full depth, overfilled, and allowed to cure for a minimum of ten minutes before shaving level with the concrete.

**SPALLS/BLOWOUTS:**

Remove all existing materials from the spall or blowout. Any moisture present in the spall should be eliminated prior to installation. Using a diamond blade saw, saw the joint vertically to 90° angles to a minimum depth of 1 inch. The spall should be widened slightly to ensure adhesion to freshly opened concrete. Care should be taken not to adversely affect adhesion by “burnishing” the sides of the joint with a grinder. After sawing or grinding, care should be taken that minimal amounts of dust and debris are left over in the spall. Fill the spall/blowout with dry rock filler (i.e. dry pea gravel if required) to one inch of the surface. Fill the remaining void to surface level with the **AJS**.

**RANDOM FRACTURES:**

Remove all existing joint sealer and joint backer. Any moisture present in the joint should be eliminated prior to installation. Using a diamond blade saw, saw the joint vertically to 90 ° angles to a minimum depth of 1 inch. The joint should be widened slightly to ensure adhesion to freshly opened concrete. Care should be taken not to adversely affect adhesion by “burnishing” the sides of the joint with a grinder. After sawing or grinding, care should be taken that minimal amounts of dust and debris are left over in the joint. The joint should be vacuumed using a common “shop-vac” to remove as much dust and debris as possible. In some cases, closed cell joint backer can be used to prevent “sinkers”

<p>or continuously running material. It should be noted that the use of joint backer does not provide optimum joint protection. It may be necessary to stop “sinkers” by making several passes over the joint and allowing the material to cure in between passes. <b>AJS</b> should be placed in the joint full depth, overfilled, and allowed to cure for a minimum of ten minutes before shaving level with the concrete.</p>	<p>the components. However, it is recommended to warm the material to a minimum of 60° F before application.</p>
<p><b><u>APPLICATION NOTES:</u></b> It is very important to maintain constant pressures while installing <b>AJS</b> with a plural component pump. A variation in pressures can result in loss of properties, poor color retention and bubbling. Hose heat is not required at ambient temperatures. Low temperatures may require the use of hose heat to improve flowability.</p>	<p><b><u>PACKAGING:</u></b> <i>AJS</i> is available in 5 gal buckets or 55 gal drums. The “A” side contains 500 lbs of material. The “B” side contains 450 lbs of material.</p>
<p><b><u>REPAIRS AND MAINTENANCE:</u></b> Repairs to divots caused by unforeseeable abuse can be repaired very easily. The damaged area should be removed to sound <b>AJS</b> and concrete. It may be necessary to remove <b>AJS</b> with a pocketknife or pneumatic saw and should include removal of all damaged materials to the fresh concrete. The damaged area should be squared to 90° and solvent wiped with acetone. <b>AJS</b> should be placed in the damaged area.</p>	<p><b><u>SHIPPING INFORMATION:</u></b> <i>AJS</i> can ship via commercial truck lines.</p>
<p><b><u>CLEAN-UP/DISPOSAL:</u></b> Cured product may be disposed of with out restriction. The uncured isocyanate and resin portions should be mixed together and disposed of in a normal manner. “Drip-free” containers should be disposed of in accordance with local, state and federal laws.</p> <p><b><u>SAFETY AND HANDLING:</u></b> Refer to MSDS sheets.</p> <p><b><u>SHELF LIFE AND STORAGE:</u></b> Six months in factory delivered unopened drums. Keep away from extreme heat, cold, and moisture. Maintain at a proper storage temperature of 60°F - 80°F. The components used in the <b>AJS</b> have been specially formulated to withstand low temperature applications. The material can be stored at temperatures as low as 10° F with no gelation of</p>	<p><b><u>Limitations:</u></b> The chemical resistance chart should be consulted prior to any application. <i>AJS</i> was designed to protect the edges of concrete control and expansion joints. <i>AJS</i> will pull away from the joint edges if too much slab movement is encountered. This characteristic allows for easy replacement and to alert the property owners that movement is present.</p>
<p><b><u>CLEAN-UP/DISPOSAL:</u></b> Cured product may be disposed of with out restriction. The uncured isocyanate and resin portions should be mixed together and disposed of in a normal manner. “Drip-free” containers should be disposed of in accordance with local, state and federal laws.</p> <p><b><u>SAFETY AND HANDLING:</u></b> Refer to MSDS sheets.</p> <p><b><u>SHELF LIFE AND STORAGE:</u></b> Six months in factory delivered unopened drums. Keep away from extreme heat, cold, and moisture. Maintain at a proper storage temperature of 60°F - 80°F. The components used in the <b>AJS</b> have been specially formulated to withstand low temperature applications. The material can be stored at temperatures as low as 10° F with no gelation of</p>	<p><b><u>Warranty:</u></b> The technical data and any other printed information furnished by <b>Engineered Polymers, Inc.</b> is true and accurate to the best of our knowledge. <i>AJS</i> conforms to in-house quality control procedures and should be considered free of defects. Due to the wide range of applications of this product, it is impossible to assume responsibility for any errors in regard to application, coverage, workmanship, over-spray or injuries resulting from the use of <i>AJS</i>. <b>Engineered Polymers, Inc.</b> makes no warranty, expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event.</p>

**ADHESION RESULTS:**

**ASTM D-4541 Elcometer**

Concrete (No primer) >400 psi → Concrete Failure

**CHEMICAL RESISTANCE:**

<u>Chemical</u>	<u>Result (25°C)</u>
Acetic Acid (100%)	R
Brake Fluid (DOT3)	RC
Clorox® (10%) H <sub>2</sub> O	C, Dis
Diesel Fuel	R
Gasoline	R
Hydrochloric Acid (10%)	R
Hydraulic Fluid (oil)	R, Dis
Mineral Spirits	R
Motor Oil	R, Dis
Muriatic Acid (10%)	R
NaCl / H <sub>2</sub> O (10%)	R
Potassium Hydroxide (10%)	R
Sodium Hydroxide (10%)	R
Sodium Bicarbonate	R
Sugar / H <sub>2</sub> O (10%)	R
Sulfuric Acid (10%)	R, Dis
Sulfuric Acid (>22%)	NR
Vinegar / H <sub>2</sub> O (5%)	R
Water	R
Xylene	C

- \*R ⇒ Recommended  
⇒ Little or no visible damage
- \*RC ⇒ Recommended Conditional  
⇒ Some effect, swelling, discoloration
- \*C ⇒ Conditional  
⇒ Crackling-wash down within 1 hour of spillage to avoid effects
- \*NR ⇒ Not Recommended
- \*Dis ⇒ Discoloration

**ADDITIONAL RESULTS:**

In certain cases, it may be recommended by the manufacturer to utilize a different formulation speed or hardness depending upon the specific needs of the application. The *AJS* series offers several different hardness readings from 45 (Shore A) to 75 (Shore D). The physical properties, gel times, and reaction times vary with the formulation. The *AJS* formulations are available in 2:1 and 1:1 volume ratios. Call the manufacturer for specific technical information.

**COVERAGE CALCULATIONS:**

Coverage Rate = Feet/gallon: Does not include overfilling.

**Joint Width (Inches)**

Inches	1/8	1/4	1/2	3/4	1
1/8	1230	615	308	205	154
1/4	615	308	154	102	77
1/2	308	154	77	51	38
3/4	205	103	51	34	25
1	154	77	38	25	19
1 1/2	205	51	25	17	12
2	77	38	19	12	9
3	52	25	12	8	6

**OTHER TEST DATA/LITERATURE**

**AVAILABLE:**

Specifications/Pictorial for installation of *AJS* in concrete control and expansion joints.

