

# STRUCTURAL adhesives



## ***EPIC RESINS***

### ***QUALITY ADHESIVES FOR YOUR APPLICATION***

At Epic Resins, we specialize in formulating quality adhesives that meet our customers' specific application needs. Although many of our customers rely on us for our wide variety of standard adhesives, we realize that custom made formulations are also necessary from time to time. We have the ability to analyze your application needs and the expertise to formulate the most appropriate system for you.

In business since 1958, we have dedicated ourselves to formulating quality products and servicing our customers. In order to achieve our goal of complete customer satisfaction, we have implemented an ISO 9001 Quality Management System and an ISO 14001 Environmental Management System.

Finally, our commitment to service goes beyond mere specification conformance. Our complete support staff of Technical Sales Representatives and our departments of Research and Development, Quality Control and Customer Service are ready to assist you every step of the way. From timely delivery to equipment selection and troubleshooting, Epic Resins is your complete adhesives source.

### ***COMPREHENSIVE QUALITY ASSURANCE PROGRAM***

- Rigid Vendor Certification Program
- Statistical Process Control
- Statistical Quality Control
- ISO 9001
- ISO 14001

### ***COMMITMENT TO SERVICE***

- Knowledgeable Technical Sales Representatives
- Experienced Chemists and Lab Technicians
- Continuous Research and Development
- Trained Support Staff

### ***UNPARALLELED "CUSTOM" SERVICE***

- Ability to Analyze Application Needs
- Expertise to Formulate Appropriate Systems
- Assistance with Equipment Selection and Trouble-Shooting

***DEDICATED TO UNPARALLELED QUALITY PRODUCTS AND SERVICE FOR MORE THAN 50 YEARS!***

## **EPIC RESINS FORMULATES THESE AND OTHER QUALITY ADHESIVES**

### **EPOXY ADHESIVES**

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#### **0108**

Epic 0108 is a one component, slightly thixotropic epoxy resin that features moderate temperature curing combined with outstanding stability at normal ambient temperatures. Epic 0108 features good adhesion to many plastic and metal substrates.

#### **0172**

Epic 0172 is a one component, extremely resilient epoxy resin that features excellent thermal shock properties. Epic 0172 performs well in temperatures ranging from -40°F to over 400°F, resists cracking and provides good chemical resistance.

#### **0188**

Epic 0188 is an aluminum-filled one component heat cure epoxy resin adhesive that is designed to be a non-slumping paste in a 3/8" bead. Epic 0188 exhibits superior adhesion to cold rolled steel and fiberglass and boasts a heat distortion temperature over 300°F.

#### **0193**

Epic 0193 is a one component epoxy adhesive. Epic 0193 has been designed as a non-sagging thixotropic paste that is resilient and offers good chemical resistance to gasoline and oils. Epic 0193 retains its' adhesive properties over a wide temperature range and is recommended when bonding materials in environments that see moderate temperatures and severe vibration.

#### **S7454**

Epic S7454 is a two component, moderately thixotropic epoxy resin adhesive possessing superior adhesion, strength, and water resistance. Epic S7454 has a 1:1 by weight or volume mix ratio with a long pot life combined with a fast cure. Epic S7454 possesses excellent initial grab which makes it especially suitable for applications where the adhesive is applied on a vertical surface.

#### **S7005**

Epic S7005 is a modified epoxy adhesive that provides excellent bond strength to a wide variety of materials including difficult to bond vinyl substrates. Epic S7005 contains no volatiles, thereby minimizing air pollution potential and alleviating concern over governmental environmental controls legislation. Epic S7005 has been demonstrated to develop good bonds in applications such as: 1. Vinyl to metal substrates 2. Fabric to vinyl substrates 3. Fabric to phenolic impregnated paper substrates 4. Foam to metal substrates. Epic S7005 has a convenient 2:1 by volume mix ratio and is designed for meter mix/dispense applications.

#### **S7448**

Epic S7448 is a two component, unfilled adhesive that retains a significant portion of room temperature strength @94°C as well as @-54°C. The cured adhesive is also affected minimally by exposure to 100%RH. Epic S7448 features a convenient 3:1 by volume mixing ratio and only requires a moderate temperature curing

schedule to develop optimum properties. Epic S7448 also meets the requirements of ASTM E-1794.

#### **R1003/H5002**

Epic R1003/H5002 is a low viscosity, filled epoxy adhesive system designed for use with plural component spray equipment as well as batch processing equipment. Epic R1003/H5002 is free flowing and nonabrasive. Epic R1003/H5002 develops excellent structural bonds and is useful for applications that will see temperatures ranging from -53°C to 121°C.

#### **S7045**

Epic S7045 is a two component, extremely fast curing, epoxy adhesive system. A 1:1 mix ratio, fast cure speed and good adhesion make this system ideal for many applications as well as field repairs. Epic S7045 is recommended for bonding wood, metal, plastic and concrete.

#### **S7068**

Epic S7068 is a two component, high strength, structural adhesive designed for bonding FRP to itself or primed metals. Epic S7068 adheres extremely well to most SMC formulations with little or no surface preparation. Epic S7068 also offers flexibility of mix ratios and good peel strength and does not sag in a 3/8 inch bead.

#### **S7069**

Epic S7069 is a premium grade, completely reactive, solvent-free two component epoxy adhesive. This system is extremely versatile which allows it to be utilized with a wide variety of applications. For example, Epic S7069 can be used as an adhesive for paint rollers and paint pads, a masonry adhesive, or a potting compound for transformers and PC boards.

#### **S7179-02**

Epic S7179-02 is a two component epoxy adhesive designed to be used in the manufacture of foam insulated steel doors as well as other panel bonding applications. Epic S7179-02 features a two hour thin film cure time and was formulated to be semi-flexible in a thin film.

#### **S7237**

Epic S7237 is a two component epoxy adhesive originally designed for the manufacture of golf clubs. Epic S7237 features a 1:1 by volume mix ratio and is an excellent choice when your application Epic S7448 is a two component, unfilled adhesive that retains a significant portion of room temperature strength @94°C as well as @-54°C. The cured adhesive is also affected minimally by exposure to 100%RH. Epic S7448 Features a convenient 3:1 by volume mixing ratio and only requires a moderate temperature curing schedule to develop optimum properties, Epic S7448 also meets the requirements of ASTM E-1794.

#### **S7276**

Epic S7276 is a 1:1 by volume modified epoxy adhesive that provides excellent bond strength to a wide variety of

materials including difficult to bond vinyl substrates. Epic S7276 is flexible, helping to minimize strain that would cause more rigid adhesives to fail.

### **S7333**

Epic S7333 is a two component epoxy adhesive designed to be a non-sag paste that cures to a rigid high strength polymer. Epic S7333 is an excellent product for in-the-field repairs and applications that require an adhesive be applied to a vertical surface.

### **S7375**

Epic S7375 is a two component epoxy adhesive system that offers a convenient mixing ratio and requires a moderate temperature curing schedule to develop optimum properties. Epic S7375 was specifically designed for engineered beams and joists; however, S7375 is ideal for bonding many substrates including wood, metal, glass and concrete.

### **S7401**

Epic S7401 is a two component epoxy adhesive that features a quick thin film set time and excellent adhesion to aluminum. This product has a green strength of 475 psi after 3 hours at 25°C.

## ***URETHANE ADHESIVES***

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### **RM2000**

Epic RM2000 is a single component moisture cure adhesive with a moderate viscosity and a 20-30 minute work time. Epic RM2000 bonds well to a variety of substrates including PVC, rubber matting, aluminum, and steel. Epic RM2000 excels in applications where the adhesive will see stresses from other operations within hours.

### **RM2001**

Epic RM2001 is a single component moisture cure urethane adhesive for use in a various panel bonding applications. The RM2001 has a work time of 2-3 hours followed by a quick cure, enabling the user to turn over presses more quickly than other long work life moisture cure adhesives.

### **RM2002**

Epic RM2002 is a single component 100% solids moisture cure adhesive designed to be used with a roll coater for various panel bonding applications. Epic RM2002 adheres well to many substrates including PVC and primed aluminum.

### **RM2003**

Epic RM2003 is a 100% solids moisture cure adhesive that cures rapidly after a slight water mist. Epic RM2003 is designed to be used with a bead applicator in panel bonding applications. Epic RM2003 adheres well to many substrates including wood, PVC, and primed aluminum.

### **0192**

Epic 0192 is a single component moisture cure adhesive. Epic 0192 is designed to hold tight trowel ridges while having a low viscosity for ease of troweling. Epic 0192 is also designed specifically for bonding wood flooring to concrete substrates.

### **S7398**

Epic S7398 is a two component polyurethane system designed to have excellent adhesion to ABS as well as other plastics. Epic S7398 has excellent thermal shock properties as it remains flexible over a large thermal range.

### **S7399**

Epic S7399 is a two component urethane adhesive designed with a fast cure at elevated temperature and a convenient 2:1 by volume mix ratio. Epic S7399 will adhere to a variety of substrates including flame treated HDPE, galvanized steel, painted steel, and painted aluminum.

### **S7400**

Epic S7400 is a two component urethane adhesive designed with a convenient 1:1 by weight or volume mix ratio and a fast room temperature cure. Epic S7400 offers many features including excellent adhesion, outstanding elongation and greater stress endurance than other, more rigid adhesives.

## ***ELECTRICALLY CONDUCTIVE ADHESIVES***

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### **0113**

Epic 0113 is an electrically conductive, silver-filled, one component system. Epic 0113 features excellent electrical conductivity and the ease of application of a one component system. Epic 0113 is stored and shipped frozen to ensure dispersion of the silver filler.

### **S7023**

Epic S7023 is a two component, electrically conductive, silver-filled epoxy adhesive. Epic S7023 has been designed for applications where electrical conductivity along with superior bond strength are important design criteria. Epic S7023 has a convenient mix ratio, a 2 hour pot life and is a room temperature curing system that can be accelerated with heat.

### **S7076**

Epic S7076 is a two component, 100% reactive, carbon filled, electrically conductive epoxy compound. Epic S7076 features excellent adhesion to most metals, flexibility, and is designed to prevent running and dripping during application.

# EPIC RESINS

## ADHESIVE SELECTION CHART

Product	Mix Ratio by Weight	Mix Ratio by Volume	Viscosity (in cps) ASTM D-2393	Weight per Gallon	Gel Time ASTM D-3056	Tensile Shear Adhesion (psi) ASTM D-1002	Shore Hardness	Cure Schedule	Bonding Substrates*
<b>EPOXY ADHESIVES</b>									
0108	1 Component	1 Component	40,000 - 70,000	8.40 - 9.00	4 - 6 min. @ 100C or 50 - 70 sec. @ 150C	1300 - 1800	83 - 87 D	1 hr. @ 100C or 10 min. @ 150C	A,C
0172	1 Component	1 Component	100,000 - 130,000	12.80 - 13.20	4 - 7 min. @ 150C**	1300 - 1500	81 - 85 D	25 - 35 min. @ 204C	A,C
0188	1 Component	1 Component	800,000 - 1,300,000	11.00 - 11.50	10 min. maximum @ 150C**	2800 minimum	88 - 95 D	70 - 90 min. minimum @ 150C	A,C,D
0193	1 Component	1 Component	300,000 - 500,000	8.80 - 9.20	5 - 6 min. @ 150C**	1450 - 1650	68 - 72 D	2 hrs. @ 150C	A,C
S7454	1A : 1B	1A : 1B	100,000 - 200,000	12.20 - 12.40	70 - 90 min. @ 25C (100 grams)	3400 - 3600	89 - 91 D	2 - 3 hrs. @ 25C	A,B,C,D,E,F
S7005	100A : 43B	2A : 1B	16,000 - 20,000	12.50 - 12.90	5 - 6 hrs. @ 25C (200 grams)	1300 - 1800	72 - 78 D	7 days @ 25C or 1 - 2 hrs. @ 100C	A,C,D
S7448	100A : 28B	3A : 1B	2,200 - 2,600	9.15 - 9.35	60 - 90 min. @ 25C (100 grams)	2000 minimum	80 - 85 D	1 - 1.5 hrs. @ 107C	A,C,F
R1003/H5002	100R : 33H	2R : 1H	10,000 - 14,000	10.45 - 10.85	4 hrs. @ 25C (in a 5 mil film)	2660 - 2940	83 - 87 D	7 days @ 25C or 1 hr. @ 76C	A,B,C,D,E,F
S7045	1A : 1B	1A : 1B	18,000 - 22,000	9.40 - 9.60	4 - 6 min. @ 25C (100 grams)	950 - 1250	68 - 72 D	8 - 12 hrs. @ 25C	A,B,C,D,E,F
S7068	1A : 1B	1A : 1B	Thixotropic Paste	10.50 - 10.90	25 - 30 min. @ 25C (200 grams)	2565 - 2835	84 - 88 D	7 days @ 25C or 2 hrs. @ 65C	A,B,C,D,E,F
S7069	1A : 1B	1A : 1B	20,000 - 24,000	12.50 - 12.90	3 - 3.5 hrs. @ 25C (200 grams)	2050 - 2250	82 - 88 D	7 days @ 25C or 2 hrs. @ 100C	A,B,C,E,F
S7179-02	100A : 76B	100A : 78B	25,000 - 35,000	13.20 - 13.60	2 hrs. @ 25C (in a thin film)	1500 minimum	82 - 88 D	7 days @ 25C or 2 hrs. @ 65C	A,B,C,E,F
S7237	100A : 71B	1A : 1B	21,000 - 25,000	9.65 - 9.80	2.5 - 3.5 hrs. @ 25C (100 grams)	3325 - 3675	84 - 89 D	7 days @ 25C or 2 hrs. @ 65C	A,C,D
S7276	100A : 86B	1A : 1B	16,000 - 20,000	12.50 - 12.90	5 - 6 hrs. @ 25C (200 grams)	380 - 420	78 - 82 A	7 days @ 25C or 2 hrs. @ 65C	A,C,D,F
S7333	1A : 1B	1A : 1B	Non - sag Paste	11.90 - 12.30	1 - 2 hrs. @ 25C (200 grams)	1400 - 1800	80 - 84 D	7 days @ 25C or 2 hrs. @ 65C	A,C,D
S7375	100A : 85B	1A : 1B	50,000 - 70,000	8.50 - 8.80	2.5 - 3.5 hrs. @ 25C (200 grams)	3400 - 3700	83 - 87 D	7 days @ 25C or 2 hrs. @ 65C	A,B,C,D,E,F
S7401	1A : 1B	100A : 113B	6,000 - 8,000	10.80 - 11.20	7 - 10 min. @ 25C (100 grams)	5422 - 5992	77 - 83 D	7 days @ 25C or 2 hrs. @ 65C	A,B,C,D,E,F
<b>URETHANE ADHESIVES</b>									
RM2000	1 Component	1 Component	10,000 - 20,000	9.55 - 9.85	NA	50 - 100	Rigid	12 - 24 hrs. @ 25C 50 %RH	A,B,C,D,E,F
RM2001	1 Component	1 Component	5,000 - 9,000	9.40 - 9.50	NA	600 - 800	Flexible	2 hrs. after water mist	A,B,C,D,E,F
RM2002	1 Component	1 Component	2,800 - 3,500	9.30 - 9.50	NA	500 - 700	Flexible	12 hrs. @ 25C 50 %RH	A,B,C,D,E,F
RM2003	1 Component	1 Component	2,900 - 4,000	9.40 - 9.60	NA	350 - 450	Rigid	<1 hour after water mist	A,B,C,D,E,F
0192	1 Component	1 Component	40,000 - 60,000	12.90 - 13.10	NA	75 - 125	Flexible	6 - 8 hrs. @ 25C 50%RH	B,D,E,F
S7398	100A : 89.4B	1A : 1B	1,000 - 1,500	8.80 - 9.05	2 - 3 min. @ 25C (100 grams)	60 - 70 (polycarbonate)	48 - 53 A	24 hrs. @ 25C	B,D,F
S7399	100A : 55.8B	2A : 1B	3,000 - 3,500	9.60 - 9.75	1.5 - 3 min. @ 25C (100 grams)	2300 - 2700	87 - 92 A	10 hrs. @ 25C or 2 min. max @ 75C	A,C,D,F
S7400	1A : 1B	1A : 1B	Paste	10.35 - 10.75	15 - 25 min. @ 25C (100 grams)	1800 - 2100	70 - 74 D	2 hrs. @ 65C or 24 hrs. @ 25C	A,B,C,D,F
<b>ELECTRICALLY CONDUCTIVE ADHESIVES</b>									
0113	1 Component	1 Component	200,000 - 400,000	18.50 - 19.00	4 - 6 min. @ 150C**	1500 - 1800	83 - 87 D	1 hr. @ 150C	A,C,F
S7023	1A : 1B	1A : 1B	Paste	18.65 - 18.85	>12 hrs. @ 25C	1200 minimum	85 - 89 D	1 - 2 hrs. @ 120C	A,C,D,F
S7076	2A : 1B	2A : 1B	Paste	9.20 - 9.60	75 - 125 secs. @ 150C**	1150 - 1350	92 - 100 A	7 days @ 25C or 6 - 8 hrs. @ 65C	A,C,D,F

A - Aluminum B - Wood C - Metals (steel, copper, iron) D - Plastics E - Masonry F - Fiberglass

\* Products have performed using suggested substrates, however, pre-production testing is always recommended.

\*\* These are hot plate gel times.

ISO 9001 : 2000



CERTIFICATE NO. 02696

## ***EPIC RESINS***

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