



EXTRA FAST SETTING EPOXY GENERAL PURPOSE EPOXY

PART NO. **EP3**

DESCRIPTION

EP3 is a two-component, amber-colored, room temperature curing, extra fast-setting epoxy adhesive that is used for repairs, fixturing, and bonding to plastics, metal, ceramics, concrete, wood, and stone in a 3.5 gm DOUBLE/BUBBLE® packet. EP3 is an excellent, general-purpose adhesive that will cure at as low as $-18\text{ }^{\circ}\text{C}$ ($0\text{ }^{\circ}\text{F}$).

RECOMMENDED SUBSTRATES

Metals, Carbon Steel, Stainless Steel, Aluminum, Plastics, Epoxy, Stone, Wood, Glass, Ceramic, and Leather.

TYPICAL USES

This Extra Fast-Setting Epoxy can be used to repair tools, auto parts, electrical and electronic components, furniture and other applications that require a fast-setting adhesive.

GENERAL PROPERTIES

Technology / Base	Epoxy
Type of Product	Structural Adhesive
Components	Two-Component
Curing	Room Temperature (secondary thermal cure)
Appearance / Color	Amber
Consistency	Thick Viscous Liquid

PACKAGING

The DOUBLE/BUBBLE® package is a handy, dual-pouch, one-shot, job-size packaging concept. It reduces the waste typically associated with the use of larger quantities of two-component adhesives. This unique packaging ensures that DOUBLE/BUBBLE(r) adhesives are always factory fresh and accurately portioned for optimum adhesive performance.

CURING PROCESS

The cure schedule is dependent upon the temperature. The recommended cure schedule will vary with the desired properties.

HANDLING & CLEANUP

See SDS for handling and clean-up information.

SAFETY & DISPOSAL

See SDS for safety and disposal information.

FEATURES & BENEFITS

- Room temperature cure
- Extra fast setting
- Excellent cohesive strength
- Cure at as low as $-18\text{ }^{\circ}\text{C}$ ($0\text{ }^{\circ}\text{F}$)

STORAGE

These materials should be stored in a dry environment within a temperature range of $16\text{ }^{\circ}\text{C}$ to $27\text{ }^{\circ}\text{C}$ ($60\text{ }^{\circ}\text{F}$ to $80\text{ }^{\circ}\text{F}$). Extremes of temperature beyond this range may result in crystallization or polymerization of the materials.



INSTRUCTIONS

The surface must be clean and dry before application. Remove all chemicals, dirt wax, and oil.

Fold the DOUBLE/BUBBLE® package along the center seal, snip the end, squeeze out the contents, mix thoroughly and apply. These materials are intended for industrial use only.



FOLD



SNIP



SQUEEZE



MIX/APPLY

Avoid contamination with oxidized metals (such as copper, brass, or mild steel), and rust or other metal oxides. The stability of the product is greatly reduced by materials such as strong acids or bases, sulfur compounds, amines, or reducing agents of any type. Surfaces to be bonded must be clean, dry and free from grease, oil, wax, weak oxide films, and other contaminants.



PHYSICAL PROPERTIES (UNCURED)

Rheology	Value	Condition/Method
Viscosity - Part A	55,000 cPs	at 25°C
Viscosity - Part B	10,000 cPs	at 25°C
Viscosity - Mixed	40,000 cPs	at 25°C
Uncured Material Characteristics		
Specific Gravity - Part A	1.20	N/A
Specific Gravity - Part B	1.13	N/A
Specific Gravity - Mix	1.16	N/A
Volume Mix Ratio	100 to 100	N/A
Weight Mix Ratio	100 to 94	N/A
Gel Time	3 to 5 min	at 25°C
Preparation Mass	4 gram	N/A
Handling Time	15 to 30 min	N/A
Full Cure	24 hours	at 23°C
Alternate Cure	24 hours	at 25°C (77°F)
Cure Process Note	N/A	The cure schedule is dependent upon the temperature. The recommended cure schedule will vary with the desired properties.
Shelf Life	12 months	Unopened
Mechanical Properties During Cure		
Overlap Shear Strength		
15 min at 25°C	150 psi	Aluminum, Acid Etched at 25°C
30 min at 25°C	1000 psi	Aluminum, Acid Etched at 25°C
60 min at 25°C	1500 psi	Aluminum, Acid Etched at 25°C

PHYSICAL PROPERTIES (CURED)

Cured Mechanical Properties	Value	Condition/Method
Hardness	80 Shore D	ASTM D2240
Tensile Strength	7,250 psi	ASTM D638
Elongation at Break	8.50%	ASTM D638
Overlap Shear Strength		
Aluminum, Acid Etched at 25°C	3000 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at -40°C	1695 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 38°C	2400 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 66°C	1100 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 82°C	655 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 93°C	300 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 149°C	245 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 25°C, 15 min	150 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 25°C, 30 min	1000 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 25°C, 60 min	1500 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 25°C, 24 hours	3000 psi	ASTM D1002, 25°C 50% RH
T-Peel Strength		
T-Peel Strength at 25°C	1.8 pli	Acid etched Al-Al
T-Peel Strength at -40°C	1.5 pli	Acid etched Al-Al
T-Peel Strength at 82°C	2.5 pli	Acid etched Al-Al
Operating Temperature	82°C (180°F)	N/A

DISCLAIMER

IMPORTANT: The information, specifications, procedures and recommendations herein (together "information") are based on our experience and we believe these to be accurate. No representation, guarantee or warranty is made as to the accuracy or completeness of the information or that the information will avoid losses or damages or give desired results. It is user's sole responsibility to test and determine the suitability of any product for the intended use. Tests should be repeated if materials or conditions change in any way. The user is advised to review the specific context of the intended use to determine whether the user's intended use violates any law or infringes upon any patent(s). No employee, distributor or agent has any right to change these facts and offer a guarantee of performance.

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