



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 °C (0 °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 °C (0 °F)

STORAGE

These materials should be stored in a dry environment within a temperature range of 16 °C to 27 °C (60 °F to 80 °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

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