



## TECHNICAL INFORMATION

### EPOWELD® 8173 Fast Setting Epoxy Adhesive System

#### PRODUCT DESCRIPTION

EPOWELD 8173 is an extra fast setting, two-component, room temperature curing epoxy adhesive. The system will cure at as low as -18 °C (0 °F). It has a convenient mix ratio, excellent cohesive strength and bonds to most substrates including metal, wood, concrete, ceramics and many plastics. It is recommended for fast patching, fixturing and other repairs requiring quick handling strength. Two slower setting versions of this system are also available; EPOWELD 8185 which sets in approximately 10 minutes, and EPOWELD 8269 which sets in approximately 20 minutes.

EPOWELD 8173 is available in the unique DOUBLE/BUBBLE® job sized package as reorder no. 04001.

#### TYPICAL UNCURED PROPERTIES

|  | <u>Part A</u> | <u>Part B</u> | <u>Mixed</u> |
|--|---------------|---------------|--------------|
| Color  | Amber         | Amber         | Amber        |
| Viscosity @ 25 °C, cps.                            | 55,000        | 10,000        | 40,000       |
| Weight per Gallon, lbs.                            | 10            | 9.4           | 9.7          |
| Specific Gravity @ 25 °C                           | 1.2           | 1.13          | 1.16         |
| Gel time, minutes                                  |               |               |              |
| 4 gm mass @ 25 °C                                  | ---           | ---           | 5            |
| Flash Point, PMCC, °C                              | 157           | 132           | ---          |
| Filler Type  | None          | None          | None         |
| Shelf Life (in separate sealed containers), months | 12            | 12            | ---          |

#### TYPICAL CURED PROPERTIES

(Tested at 25 °C unless otherwise indicated)

| <u>Test</u>       | <u>Results</u> |
|-------------------|----------------|
| Hardness, Shore D | 80             |

#### MIXING AND CURING SCHEDULE

| <u>Ratio</u> | <u>Part A</u> | <u>Part B</u> |
|--------------|---------------|---------------|
| By weight    | 100           | 94            |
| By volume    | 100           | 100           |

The cure schedule is dependent upon the temperature. The recommended cure schedule will vary with the desired properties. The recommended schedule to achieve the typical properties is shown below:

24 hours at 25 °C (77 °F).

#### Lap Shear Strength

Acid-etched Al/Al - various cure schedules

| Cure Schedule @ 25 °C, min. | 15  | 30    | 60    |
|-----------------------------|-----|-------|-------|
| Shear Strength, psi         | 150 | 1,000 | 1,500 |

Acid-etched Al/Al - cure schedule 24 hrs. @ 25 °C

| Test Temperature, °C | -40   | 25    | 38    | 66    | 82  | 93  | 149 |
|----------------------|-------|-------|-------|-------|-----|-----|-----|
| Shear Strength, psi  | 1,695 | 3,000 | 2,400 | 1,100 | 655 | 300 | 245 |

#### T-Peel Strength

Acid-etched Al/Al - cure schedule 24 hrs. @ 25 °C

| Test Temperature, °C | -40 | 25  | 82  |
|----------------------|-----|-----|-----|
| Peel Strength, pli   | 1.5 | 1.8 | 2.5 |

#### STORAGE AND HANDLING

A wide variety of cleaning solutions are available for cured and uncured epoxies and polyurethanes. For more information on proper recommendations and procedures, contact the Technical Department.

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. Introduction of a nitrogen blanket into the containers before closing will improve the storage life of the products and reduce the possible color change due to moisture contamination.

#### SAFETY

These materials are intended for industrial use only, and the practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

Although the system contains low volatility materials, care should be taken in handling. Use adequate ventilation in the work area.

These materials may cause dermatitis in susceptible individuals. Keep off skin and out of eyes. In case of accidental skin contact, wash thoroughly with soap and water. In case of eye contact, flush eyes thoroughly with water and consult a physician immediately.

Refer to Material Safety Data Sheet for additional information.

## **ADDITIONAL INFORMATION**

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### NOTE

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