

# TECHNICAL DATA SHEET

## PERFORMANCE EPOXY PART B

### Product Description

Performance Epoxy™ Curing Agent Part B, a moderately reactive, low viscosity aliphatic amine, is water insensitive and resists "blushing" "bloom" and "sweat-out" in epoxy compositions cured in high humidity environments. Other features are light color, improved color retention as compared to conventional amine cured epoxy systems, and long pot life.

### Application Areas/Suggested Uses

- Glaze and sealer high-build coatings for decorative flooring
- Laminating binders
- Adhesive and encapsulating compounds
- Miscellaneous casting applications

### Benefits

- Low color
- Blush free
- Sweat free

### Sales Specification

| Property          | Units   | Value     | Test Method/Standard |
|-------------------|---------|-----------|----------------------|
| Amine as KOH      | mg/g    | 305 – 325 | ASTM D2896           |
| Viscosity at 25°C | cP      | 40 – 60   | ASTM D2196           |
| Color             | Gardner | 1 Max.    | ASTM D1544           |

### Typical Properties

| Property                   | Units   | Value | Test Method/Standard |
|----------------------------|---------|-------|----------------------|
| Equivalent weight, approx. |         | 76    |                      |
| Pounds/gallon @ 25°C       | lbs/gal | 7.93  | ASTM D1475           |
| Flash Point                | °F      | >200  | Setaflash            |

## General Information

Possessing excellent compatibility with liquid epoxy resins, Performance Epoxy™ Curing Agent Part B does not require an induction period to produce cured glossy surfaces even under adverse humidity conditions. Due to the great difference in viscosities between this curing agent and most liquid epoxy resins, thorough blending may take longer than usual to achieve. A mixing period of 2 or 3 minutes is usually adequate to ensure a homogeneous solution of resin and curing agent. Flow control agents such as urea-formaldehyde resin, colloidal silica, SR-82 silicone resin<sup>1</sup>, Modaflow flow control agent<sup>2</sup> or various thixotropes should be incorporated into high-build coatings to ensure good film continuity.

Cure rate is proportional to temperature and application thickness. For 5 mil films of Performance Epoxy Resin Part A Performance Epoxy™ Curing Agent Part B systems, tack-free cure is obtained in approximately 12 hours at 25 °C. Incorporation of flexibilizers or monoepoxide diluents generally extend the working life and lengthen the cure period required.

## Performance Properties

In combination with unmodified Performance Epoxy Resin Part A at ratios of 36 to 42 parts per 100 parts resin, Performance Epoxy™ Curing Agent Part B imparts strong, rigid cured state properties. Relatively little flexibilizer or monoepoxide diluent modification (generally less than 20 percent) is required to develop high extensibility and excellent impact resistance. The handling characteristics and cured state properties of the several compositions presented in Table 1 illustrate the versatility of Performance Epoxy™ Curing Agent Part B systems.

**Table 1 / Properties of Systems Cured with Performance Epoxy™ Curing Agent Part B**

| Property                | Method | Units | A   | B  | C  | D  | E  | F  |
|-------------------------|--------|-------|-----|----|----|----|----|----|
| Performance Epoxy Resin |        | pbw   | 100 | 90 | 80 | 75 | 85 | 76 |

## Handling Properties @ 25°C

| Property                | Method | Units   | A     | B    | C    | D    | E    | F    |
|-------------------------|--------|---------|-------|------|------|------|------|------|
| Viscosity               |        | cP      | 1,210 | 840  | 600  | 710  | 840  | 530  |
| Gel Time, 100 gram mass |        | minutes | 135   | 210  | 315  | 230  | 150  | 225  |
| Cure Schedule           |        | wk/°C   | 2/25  | 2/25 | 2/25 | 2/25 | 2/25 | 2/25 |

## Cured State Properties <sup>1</sup>

| Property                    | Method    | Units       | A     | B     | C     | D     | E     | F     |
|-----------------------------|-----------|-------------|-------|-------|-------|-------|-------|-------|
| Tensile Strength            | ASTM D638 | psi         | 9,200 | 5,500 | 1,900 | 2,000 | 8,800 | 4,100 |
| Tensile Elongation at break |           | %           | 4     | 24    | 102   | 77    | 8     | 80    |
| Izod impact, notched        | ASTM D256 | ft.-lb./in. | 0.53  | 0.92  | 12.50 | 3.50  | 0.52  | 0.95  |

## Chemical Resistance <sup>2</sup>

| Property                   | Method | Units | A    | B    | C    | D    | E    | F    |
|----------------------------|--------|-------|------|------|------|------|------|------|
| Distilled Water            |        | %     | 0.21 | 0.28 | 0.44 | 0.38 | 0.25 | 0.25 |
| 5% Acetic Acid             |        | %     | 0.25 | 1.1  | 2.8  | 1.7  | 1.3  | 0.78 |
| 50% Xylene/50% Isopropanol |        | %     | 8    | 14   | 35   | 22   | 9    | 20   |

<sup>1</sup> Determined on 1/8" thick castings at 25 °C. Systems were cured for 2 weeks at 25 °C.

<sup>2</sup> Percent weight gain after immersion for 24 hours at 25 °C.

## Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

To preserve product quality and prevent discoloration, it is recommended that a nitrogen blanket be maintained on the headspace of an opened container and that storage / handling temperatures in excess of 50°C (122°F) be avoided. Spillage around the opening of the container from dispensing operations will form a crystalline residue. This residue is not soluble in the curing agent nor the resin, and certain measures should be taken to prevent it from contaminating the remaining contents of the container. The crystalline residue should be removed with a warm damp wash cloth PRIOR to re-opening the container for dispensing.

## Contact Information

For product prices, availability, or order placement, call our toll-free customer service number at:  
**1-800-841-5580**

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