

# **Technical Data Sheet**

## EPIKURE™ Curing Agent 3140

#### **Product Description**

EPIKURE Curing Agent 3140 is a low viscosity reactive polyamide, high imidazoline, moderate molecular weight epoxy curing agent based on dimerized fatty acid and polyamines. Epoxy resin compatibility and thin film curves are very good.

#### Application Areas/Suggested Uses

- · Metal and plastic adhesives
- Highway and bridge deck repairs
- · Potting, casting, and encapsulation
- Synthetic flooring systems
- Maintenance coatings
- Tank and pipe linings

#### Benefits

- · Good chemical and corrosion resistance
- Good water resistance
- Good pigment and substrate wetting
- Good adhesion

#### Sales Specifications

| Property          | Value       | Unit    | Test Method |
|-------------------|-------------|---------|-------------|
| Amine Value       | 360 - 390   | mg/g    | ASTMD2896   |
| Color             | 9           | Gardner | ASTMD1544   |
| Viscosity at 40°C | 3000 - 4000 | cР      | ASTMD2196   |

### **Typical Properties**

| Property                       | Value                               | Unit    | Test Method |
|--------------------------------|-------------------------------------|---------|-------------|
| Appearance                     | Clear and free of foreign particles |         |             |
| Density@25°C                   | 8.1                                 | lbs/gal |             |
| Equivalent Weight Approx       | 95                                  |         |             |
| Flash Point                    | >110                                | °C      | ASTMD3278   |
| Mx Ratio Epoxy Resin (EEW 190) | 50                                  | PHR     |             |
| Viscosity@25°C                 | 130                                 | Р       |             |
|                                |                                     |         |             |

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## **Performance Properties**

| Table 1 / Properties of EPON Resin 828 cured with EPIKURE Curing Agent 3140 |               |              |        |          |          |          |
|---|---------------|--------------|--------|----------|----------|----------|
| Composition   | <u>Method</u> | <u>Units</u> | A      | <u>B</u> | <u>C</u> | <u>D</u> |
| EPON™ Resin 828   |               |              | 100    | 100      | 100      | 100      |
| EPIKURE Curing Agent 3140   |               |              | 45     | 90       | 45       | 90       |
|   |               |              |        |          |          |          |
| Blend properties at 25 °C   |               |              |        |          |          |          |
| Viscosity, Original   |               | ср           | 11,300 | 9,900    | 11,300   | 9,900    |
| Gel Time, 100 gram mass   |               | hours        | 2.5    | 2        | 2.5      | 2        |
| Peak Exotherm   |               |              |        |          |          |          |
| 100 gram mass   |               | °F           | 92     | 97       | 92       | 97       |
| 100 gram mass   |               | °C           | 33     | 36       | 33       | 36       |
|   |               |              |        |          |          |          |
| Cured State Properties <sup>1</sup>   |               |              |        |          |          |          |
| Heat Deflection Temperature   | D648          | °C           | 97     | 72       | 66       | 64       |
| Tensile Strength, Ultimate  | D638          | psi          | 8,500  | 7,300    | 7,400    | 7,500    |
| Tensile Elongation  |               | %            | 4.5    | 11.8     | 3.0      | 7.2      |
| Tensile Modulus, Initial  |               | ksi          | 420    | 320      | 340      | 290      |
| Flexural Strength, Ultimate   | D790          | psi          | 14,000 | 12,000   | 12,500   | 11,000   |
| Flexural Deflection   |               | in.          | 0.44   | >0.60    | >0.60    | >0.60    |
| Flexural Modulus, Initial   |               | ksi          | 310    | 340      | 400      | 340      |
| Compression Strength, Ultimate  | D695          | psi          | 33,000 | 34,000   | 12,600   | 17,200   |
| Compression Strength, Yield   |               | psi          | -      | 9,100    | 11,500   | 9,600    |

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| <u>Method</u> | <u>Units</u> | <u>A</u>                       | <u>B</u>   | <u>C</u>   | <u>D</u>  |
|---------------|--------------|--------------------------------|--|--|---|
| D256          | ft-lb/inch   | 0.51                           | 0.88   | 0.63   | 1.18  |
| D2240         | Shore D      | 84                             | 82   | 84   | 82  |
|               |              | 0.18                           | 0.33   | 0.16   | 0.25  |
|               |              | 0.02                           | 0.05   | 0.02   | 0.  |
|               |              |                                |  |  |   |
| D150          |              | 3.61                           | 3.41   | 3.85   | 3.5205  |
|               |              | 0.021                          | 0.018  | 0.011  | 0.015   |
|               | D256 D2240   | D256 ft-lb/inch  D2240 Shore D | D256 ft-lb/inch 0.51  D2240 Shore D 84  0.18  0.02 | D256 ft-lb/inch 0.51 0.88  D2240 Shore D 84 82  0.18 0.33  0.02 0.05  D150 3.61 3.41 | D256 ft-lb/inch 0.51 0.88 0.63  D2240 Shore D 84 82 84  0.18 0.33 0.16  0.02 0.05 0.02  D150 3.61 3.41 3.85 |

<sup>&</sup>lt;sup>1</sup>Determined at 25 °C on 1/8-inch thick test specimensSystems A and B were cured for 16 hours at 25 °C followed by 2 hours at 100 °C. Systems C and D were cured for 2 weeks at room temperature.

### Safety, Storage & Handling

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

Please refer to the Hexion web site for Shelf Life and recommended Storage information.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

### Packaging

Available in bulk and drum quantities.

#### **Contact Information**

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

For literature and technical assistance, visit our website atwww.hexion.com

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<sup>&</sup>lt;sup>2</sup>Percent weight gain after immersion for 24 hours.

<sup>&</sup>lt;sup>3</sup>Percent weight loss after 24 hours at 150 °C.

<sup>&</sup>lt;sup>4</sup>Determined at 1 megacycle and 25 °C.