



D.E.R.[™] 317

Liquid Epoxy Resin

Description

D.E.R.[™] 317 Liquid Epoxy Resin is a high viscosity modified reaction product of epichlorohydrin and bisphenol A.

Introduction

D.E.R. 317 Epoxy Resin is a high viscosity, fast reacting (20% faster than D.E.R.[™] 331[™] Liquid Epoxy Resin) designed for adhesives applications requiring quick gelling with amine curing agents. D.E.R. 317 Epoxy Resin can be used alone or in combination with other liquid epoxy resins to tailor cure and performance properties.

A broad range of curing agents is available to cure this resin at ambient temperatures. The most frequently used curing agents are aliphatic and cycloaliphatic polyamines, polyamides, and modified versions of these. Curing may also be done at an elevated temperature to improve selected properties such as chemical resistance and glass transition temperature. Elevated temperature cure is necessary and post-cure is required to develop full end properties if anhydride or catalytic agents are employed.

Typical Applications

This product is suitable for use in applications such as:

- Adhesives
- Marine and Protective Coatings

Typical Properties

| Property ⁽¹⁾ | Value | Method |
|----------------------------------|---------------|-------------|
| Epoxide Equivalent Weight (g/eq) | 192 – 203 | ASTM D-1652 |
| Epoxide Percentage (%) | 21.2 – 22.4 | ASTM D-1652 |
| Epoxide Group Content (mmol/kg) | 4920 – 5210 | ASTM D-1652 |
| Color (Gardner) | 5 Max. | ASTM D-1544 |
| Viscosity @ 25°C (mPa s) | 16000 – 25000 | ASTM D-445 |
| Density @ 25°C (g/ml) | 1.14 | ASTM D-4052 |
| Shelf Life (Months) | 24 | |

(1) Typical properties, not to be construed as specifications.

Safety and Handling

The Dow Chemical Company provides its customers with a product specific Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) to cover potential health effects, safe handling, storage, use and disposal information. Dow strongly encourages its customers to review the MSDS or SDS on its products and other materials prior to their use.

This liquid epoxy resin is supplied in bulk or in 235 kg tight-head drums. The resin should be stored in a dry place in its original closed packaging. This low viscosity epoxy resin should retain its chemical properties for a period of at least 24 months.

For further handling information consult the Dow brochure entitled, *DOW Epoxy Resins Product Stewardship Manual, Safe Handling and Storage*, Form No. 296-00312 and the Dow technical bulletin, *Product Coding, Shelf-life and Storage Stability*, Form No. 296-01657.

Product Stewardship

The Dow Chemical Company has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis of our Product Stewardship philosophy by which we assess the health and environmental information on our products and then take the appropriate steps to protect employee and public health and the environment. The Dow Chemical Company has enduring commitments to Responsible Care® in the management of chemicals worldwide. Our Product Stewardship program rests with every individual involved with Dow products from the initial concept and research to the manufacture, sale, distribution, and disposal of each product.

Customer Notice

Dow encourages its customers and potential users of Dow products to review their applications for such products from the standpoint of human health and environmental quality. To help ensure that Dow products are not used in ways for which they were not intended or tested, Dow personnel are available to assist customers in dealing with ecological and product safety considerations. Your Dow sales representative can arrange for the proper contacts. Dow literature, including MSDS or SDS, should be consulted prior to the use of Dow products.

Medical Application Policy

Dow will not knowingly sell or sample any product or service ("Product") into any commercial or developmental application that is intended for:

- (a) permanent (long term) contact with internal body fluids or internal body tissues. Long term is a use which exceeds 72 continuous hours (except 30 days for PELLETHANE™ Polyurethane Elastomers);
- (b) use in cardiac prosthetic devices regardless of the length of time involved (cardiac prosthetic devices include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems and ventricular bypass assisted devices);
- (c) use as a critical component in medical devices that support or sustain human life; or
- (d) use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

Additionally, all Products intended for use in pharmaceutical applications must pass the then current Pharmaceutical Liability Guidelines. For additional information please contact your regular Dow representative.

Food Contact Applications

This resin will NOT comply with the U.S. Food, Drugs and Cosmetics Act as amended under Food Additive Regulation 21 CFR 175.300.

If your applications include food contact requirements, please contact your Dow representative for further information and forthcoming EC regulations.

Regulatory Status

The base epoxy resin component of this epoxy resin solution is regarded as a polymer according to the 6th Amendment of Council Directive 67/548/EEC and as a substance according to Council Directive 92/32/EEC of 30 April 1992; the 7th Amendment of that same directive. The resin has been reported to the EC Commission as No-Longer Polymer (NLP), is registered under the NLP # 500-033-5, and is, therefore, exempt from the European Inventory of Existing Chemical Substances (EINECS). In addition, Dow confirms that the chemicals and intentional additives which form the basis of this product are listed on EINECS.

For more information on the regulatory status of this product, please refer to the MSDS or SDS for this product.

Chemical Inventory Listing

| CAS Number ⁽¹⁾ | | 25036-25-3 / Confidential Substance |
|---------------------------|--------|-------------------------------------|
| Europe | EINECS | NLP # 500-033-5 / Listed |
| United States | TSCA | 25036-25-3 / Listed |
| Canada | DSL | 25036-25-3 / Listed |
| Australia | AICS | 25036-25-3 / Listed |
| Japan | ENCS | 7-1283 / Listed |
| Korea | KECI | KE-24070 / Listed |
| Philippines | PICCS | 25036-25-3 / Listed |
| China | SEPA | 25036-25-3 / Listed |

(1) Please refer to the MSDS or SDS for this product to ensure this CAS number is consistent with the product(s) you use.

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