



D.E.R.[™] 736

Liquid Epoxy Resin

Description D.E.R.[™] 736 Epoxy Resin is a liquid reaction product of epichlorohydrin and dipropylene glycol.

Introduction D.E.R. 736 Epoxy Resin is a flexible, low viscosity, light color resin for use in coatings and adhesives. D.E.R. 736 Resins and D.E.R. 732 Epoxy Resins are designed to overcome many of the specific disadvantages of other flexibilizing systems, such as modifications with vegetable oils, polyamide or polysulfide curing agents, or long chain polyglycol.

Like D.E.R. 732 Epoxy Resin which is a longer chain version of D.E.R. 736 Epoxy Resin, D.E.R. 736 Epoxy Resin imparts flexibility, elongation and improves impact resistance. D.E.R. 736 Epoxy Resin imparts less flexibility and lower viscosity than D.E.R. 732 Epoxy Resin.

D.E.R. 736 Liquid Epoxy Resin can also serve as the basis for advanced polymers for a variety of water-borne and solvent-borne coatings. The pot-life of a formulation can be extended (reactivity reduced) when D.E.R. 736 Epoxy Resin is added to aromatic epoxy binder systems.

Typical Applications This product is suitable for use in applications such as:

- Adhesives
- Casting and Tooling
- Civil Engineering
- Automotive Coatings
- Marine and Protective Coatings
- Potting and Encapsulation

Typical Properties

| Property ⁽¹⁾ | Value | Method |
|-------------------------------------|-------------|-------------|
| Epoxide Equivalent Weight (g/eq) | 175 – 205 | ASTM D-1652 |
| Epoxide Percentage (%) | 21.0 – 24.6 | ASTM D-1652 |
| Epoxide Group Content (mmol/kg) | 4880 – 5720 | ASTM D-1652 |
| Color (Platinum Cobalt) | 125 Max. | ASTM D-1209 |
| Viscosity @ 25°C (mPa·s) | 30 – 60 | ASTM D-445 |
| Hydrolyzable Chloride Content (ppm) | 2000 Max. | ASTM D-1726 |
| Density @ 25°C (g/ml) | 1.13 | ASTM D-4052 |
| Volatile Content (wt%) | 0.5 Max. | ASTM E-203 |
| 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.

Safety and Handling
(continued)

D.E.R.[™] 736 Epoxy Resin is supplied in bulk or in 220 kg tight-head drums. The resin should be stored in dry place in its original closed packaging. D.E.R. 736 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 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;
- (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. However, D.E.R. 736 Epoxy Resin will, when properly formulated and cured for indirect food contact applications, comply with the U.S. Food, Drugs and Cosmetics Act as amended under the Food Additive Regulation 21 CFR 175.105; "substances for use only as Components of Adhesives".

If your applications include food contact requirements, please contact your Dow representative for further information and forthcoming EC regulations. Also consult the Dow data sheet, *Food Additive Status for Epoxy Resins, Curing Agents and Epoxy Novolac Resins*, Form No. 296-01425.

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D.E.R. 736 Liquid Epoxy Resin

Form No. 296-01507-0109X-TD

Regulatory Status

This epoxy resin is regarded as a polymer according to the 6th Amendment of Council Directive 67/548/EEC as well as according to Council Directive 92/32/EEC of 30 April 1992; the 7th Amendment of that same directive, 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.

Regarding the CAS registration numbers for this Dow epoxy resin please be informed that CAS registration number 41638-13-5 as well as CAS registration number 162303-54-0 and CAS registration number 9072-62-2 can be used to describe this material. All three CAS numbers describe epoxy resins produced by the condensation of epichlorohydrin with polypropylene glycol.

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⁾ | | 41638-13-5 (162303-54-0/9072-62-2) |
|---------------------------|--------|-------------------------------------|
| Europe | EINECS | Polymer |
| United States | TSCA | 41638-13-5 |
| Canada | DSL | 41638-13-5 |
| Australia | AICS | 41638-13-5 |
| Japan | ENCS | 7-343 |
| Korea | KECI | KE-27711 |
| Philippines | PICCS | 41638-13-5 |
| China | SEPA | 41638-13-5 |

(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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