



D.E.R.[™] 542

Brominated Epoxy Resin

Description

D.E.R.[™] 542 Epoxy Resin is a solid epoxy resin of the tetrabromobisphenol-A epichlorohydrin type.

Introduction

D.E.R. 542 Epoxy Resin is a solid, brominated epoxy resin designed for use where maximum bromine is needed to offset large ratios of hardener or non-brominated resin. The improved purity of D.E.R. 542 Brominated Epoxy Resin makes it especially suitable for electronic related applications where maximum performance and reliability are desired.

Typical Applications

This product is suitable for use in electrical laminates.

Typical Properties

Property ⁽¹⁾	Value	Method
Epoxide Equivalent Weight (g/eq)	305 – 355	ASTM D-1652
Epoxide Percentage (%)	12.1 – 14.1	ASTM D-1652
Epoxide Group Content (mmol/kg)	2820 – 3280	ASTM D-1652
Color (Gardner)	12 Max.	ASTM D-1544
Softening Point (°C)	52 – 62	ASTM D-3104
Bromine Content (%)	46 – 51	Calculated
Hydrolyzable Chloride Content (ppm)	500 Max.	ASTM D-1726
Volatile Content (wt%)	1 Max.	DowM 101188
Ionic Chloride (ppm)	50 Max.	DowM 101966
Epichlorohydrin (ppm)	10 Max.	DowM 101579
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.

D.E.R. 542 Epoxy Resin is supplied in phenolic lined 115 liter open-head drums. The resin should be stored in a dry place in its original closed packaging. D.E.R. 542 Brominated Epoxy Resin should retain its chemical properties for a period of at least 24 months.

D.E.R. 542 Epoxy Resin has a pumping temperature of approximately 130°C. This product may crystallize upon storage. When crystallization occurs, the resin must be heated to above the crystalline melt point of approximately 107°C to regain liquid properties.

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 solution does 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

This brominated epoxy resin is regarded as polymer according to the 6th Amendment of Council Directive 67/548/EEC and as substances according to Council Directive 92/32/EEC of 30 April 1992; the 7th Amendment of that same directive. This epoxy resin has been reported to the EC Commission as a No-Longer Polymer (NLP), is registered under NLP # 500-107-7, 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.

The Tetrabromo-4,4'-isopropylidenediphenol reaction product with epichlorohydrin is registered under CAS registration number 040039-93-8 on U.S. Toxic Substances Control Act (TSCA).

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D.E.R. 542 Brominated Epoxy Resin

Form No. 296-01509-1205X-TD

Regulatory Status (*continued*)

Chemical Inventory Listing

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

CAS Number ⁽¹⁾		040039-93-8
Europe	EINECS	NLP # 500-107-7
United States	TSCA	040039-93-8
Canada	DSL	040039-93-8
Australia	AICS	040039-93-8
Japan	ENCS	(7)-1288
Korea	KECL	KE-23972
Philippines	PICCS	040039-93-8
China	SEPA	040039-93-8

(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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