



D.E.R. 662E

Solid Epoxy Resin

Description

D.E.R. 662E solid epoxy resin is a low molecular weight solid reaction product of epichlorohydrin and bisphenol-A.

Introduction

D.E.R. 662E solid epoxy resin is a standard, low molecular weight, solid epoxy resin which has been developed for use mainly in powder coatings where it provides excellent flow in standard as well as in low-temperature cure systems. D.E.R. 662E solid epoxy resin can be used in both epoxy and epoxy/polyester powder coating applications to improve mechanical and chemical resistance properties.

Notice: Consult the Safety and Handling section on the next page for product specific requirements/suggestions as well as the corresponding Sales Specification.

Typical Properties

Property ⁽¹⁾	Value	Method
Epoxide Equivalent Weight, (g/eq)	590 – 630	ASTM D-1652
Percentage Epoxide, (%)	6.8 – 7.3	ASTM D-1652
Epoxide Group Content, (mmol/kg)	1590 – 1700	ASTM D-1652
Solution Viscosity, 25 °C (cSt)	260 – 330 (2)	ASTM D-445
Melt Viscosity @ 150 °C (mPa.s)	1100 – 2100	ASTM D-4287
Softening Point (°C)	87 – 93	RPM 108-C
Color, Pt-Co	90 Max. (2)	ASTM D-1209
Particulate Rating	Pass	DowM 101668
Shelf Life, Months	12	

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

(2) 40 % in diethylene glycol monobutyl ether

Typical Applications

This product is suitable for use in applications such as

- Can Coatings
- Coil Coatings
- Marine & Protective Coatings
- Powder Coatings

Safety and Handling

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

Notice: This epoxy resin is supplied as solid flakes in 25 kg PE bags or 1000 kg Big-Bags. This resin should be stored in a cool, dry place in its original closed packaging in order to avoid sintering of the material. Flakes / granules may fuse if they are subjected to excessive heat or compression. Stacking bags of D.E.R. low molecular weight, solid epoxy resins should be avoided whenever possible, see also the Sales Specification. Chemically this low molecular weight solid epoxy resin should retain its properties for a period of at least 12 months. For further handling information consult the Dow brochure entitled, DOW Epoxy Resins Product Stewardship Manual, Safe Handling and Storage, Form No. 296-00312-898.

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 world wide. 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 Material Safety Data Sheets 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

When properly formulated and cured for food contact applications, this resin will comply with the U.S. Food, Drugs and Cosmetics Act as amended under Food Additive Regulation 21 CFR 175.300 (b)(3)(viii)(a); "Epoxy resins, as basic polymer". This use is subject to good manufacturing practices and limitations specified in each regulation, which should be consulted for complete details.

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.

Regulatory Status

The solid epoxy resin is regarded as a polymer according to Council Directive 92/32/EEC of 30 April 1992; the 7th Amendment of Council Directive 67/548/EEC, and is, therefore, exempt from the European Inventory of Existing Chemical Substances (EINECS). In addition, Dow confirms that the chemicals and intentional additives that form the basis of this product are listed on EINECS.

For more information on the regulatory status of this product, please refer to the Material Safety Data Sheet (MSDS) or SDS for this product.

Chemical Inventory Listing

CAS Number		25036-25-3
Europe	EINECS	Polymer
United States	TSCA	25036-25-3
Canada	DSL	25036-25-3
Australia	AICS	25036-25-3
Japan	ENCS	7-1283
Korea	KECL	KE-24070
Philippines	PICCS	25036-25-3
China	IECS	25036-25-3

* Please refer to the Material Safety Data Sheet (MSDS) or SDS for this product to ensure this CAS number is consistent with the product(s) you use.

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