

D.E.R. 660-X80

Epoxy Resin Solution

Description

D.E.R.* 660-X80 liquid epoxy resin solution is a semi-solid reaction product of epichlorohydrin and bisphenol-A in a xylene solution.

Introduction

D.E.R. 660-X80 epoxy resin is an intermediate molecular weight epoxy resin in a xylene solution developed for use in high solids/high build coating formulations. This epoxy resin solution can provide the high solids and chemical resistance of liquid epoxy resins combined with the adhesion, flexibility and fast cure of higher molecular weight resins. D.E.R. 660-X80 epoxy resin can form the basis of a two-component coating system with either polyamine, polyamide or polyamidoamine curing agents to provide high quality coatings which are resistant to a number of chemical reagents. These coatings also exhibit the excellent mechanical properties normally associated with a 1-type solid epoxy resins. D.E.R. 660-X80 is ideal for medium to heavy duty coatings, such as ship hulls, marine paints, tank linings and industrial maintenance coatings.

Typical Applications

This product is suitable for use in applications such as:

- Civil Engineering
- Marine & Protective 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. For further handling information consult the Dow brochure entitled, *DOW Epoxy*

Typical Properties¹

Epoxide Equivalent Weight, (g/eq)	300 - 350 ²	ASTM D-1652
Percentage Epoxide, (%)	12.3 - 14.3 ²	ASTM D-1652
Epoxide Group Content, (mmol/kg)	2860 - 3340 ²	ASTMD-1652
Viscosity @ 25°C (77°F), (mPa.s)	3400 - 15000	ASTM D-445
Color, Gardner	3 Max.	ASTM D-1544
Density @ 25°C (77°F), (g/ml)	1.09	ASTM D-4052
Non-volatile Content, (wt%)	79 - 81	DowM 101188
Flash Point, (°C)	28	ASTM D-3278
Solvent	xylene	
Shelf Life, (Months)	24	

¹ Typical properties; not to be construed as specifications

² Based on solids

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 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 Material Safety Data Sheets should be consulted prior to the use of Dow products.

Food Contact Statement

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. 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 component in this epoxy resin solution 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 which form the basis of this product are listed on EINECS. The xylene solvent component in this epoxy resin solution is listed on EINECS under the registration number 215-535-7. A major impurity of the xylene solvent is ethylbenzene which is registered under EINECS # 202-849-4. With respect to China, please note that there is currently no formal Chinese Chemical Inventory legislation in place. The Chinese Authorities are in the process of drafting such legislation. There is in place an "Informal 1997 PRC Chemical Inventory List" and the above mentioned CAS Reg. Nr. are listed on it.

Chemical Inventory List

CAS Number*		25036-25-3/1330-20-7
Europe	EINECS	Polymer/215-535-7 (202-849-4)
United States	TSCA	25036-25-3/1330-20-7 (100-41-4)
Canada	DSL	25036-25-3/1330-20-7 (100-41-4)
Australia	AICS	25036-25-3/1330-20-7 (100-41-4)
Japan	MITI	7-1283/3-3 (3-28)
Korea	KECL	KE-24070/KE-35427 (KE-13532)
Philippines	PICCS	25036-25-3/1330-20-7 (100-41-4)
China	Informal 1997 PRC Inventory	25036-25-3/1330-20-7 (100-41-4)

* 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.

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

For additional information:

In the U.S. and Canada,
contact The Dow Customer Information Group at:
1-800-441-4369 or 989-832-1426
Fax: 989-832-1465

In Mexico,
Call 95-800-441-4369 (Toll Free) or
52-5-2014718 (Outside Mexico)

In Latin America,
contact The Dow Chemical Service Center at:
In Argentina, call 54 11 4390329
In Brazil, call 55 11 51889367

In the Pacific,
contact The Dow Customer Information Group at:
+800-7776-7776 (Toll Free) or +60-3-7958-3392
Fax: +800-7779-7779 (Toll Free) or +60-3-7958-5598

In Europe, Middle East and Africa,
contact The Dow Customer Information Group at:
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*Toll Free from Austria, Belgium, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and The United Kingdom.

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Email address: <http://www.dow.com/assistance/thoughts.htm>

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