

Technical Data Sheet

EPON™ Resin 2005

Product Description

EPON™ Resin 2005 is a fusion derived solid bisphenol A/epichlorohydrin epoxy resin designed for both thick film functional and intermediate film thickness decorative powder coatings. This product which is slightly higher in molecular weight than EPON Resin 2004, is recommended for use in pipe coatings, electrical insulation, rebar coatings and in decorative finishes that must be tough and durable.

Formulation and Application Information

- Consult Technical Brochure entitled, "Formulating Powder Coatings with EPON™ Resins"
- For bulk handling of EPON Resin 2005, consult Technical Bulletin entitled, "Solid EPON™ Resins in New Convenient Bulk Containers for More Efficient Product Handling"

Benefits

- Uniform quality from lot to lot
- Very stable under normal
- Multiple filtration to remove storage conditions particulate contaminants
- Provides consistent cure response
- Extremely low color with a wide variety of curing agents
- Low in moisture and total
- Extremely narrow property range volatiles content

Sales Specifications

Property	Value	Unit	Test Method
Color ³	100 max	Platinum-Cobalt	ASTMD1209
Weight per Epoxide ¹	1200 - 1400	g/eq	ASTMD1652
Viscosity at 25°C	25 - 55	cP	ASTMD445

Typical Properties

EPON Resin 2005
<https://www.hexion.com/en-US/product/epon-resin-2005>

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Property	Value	Unit	Test Method
Density ⁶	1.19	g/mL	
Bulk Density	38 - 42	lbs/ft ³	
Glass Transition Point ⁹	70 - 80	°C	
Hydrolyzable Chlorine ⁷	300	ppm	ASTMD1726
Melt Viscosity ⁴ at 150°C	300 - 0	P	ASTMD2196
Mettler Softening Point ⁵	110 - 120	°C	ASTMD-3461
Moisture ⁸	< 0.3	%	
Sodium	< 5	ppm	

¹ Grams of resin containing one gram-equivalent of epoxide. ASTM D 1652

² Determined on a 40% by weight resin solution in MEK. ASTM D 445 (Kinematic Viscosity at 25 °C).

³ Determined on a 40% by weight resin solution in MEK. ASTM D 1209 (Test for Platinum-Cobalt Color)

⁴ BrookfieldThermosel Method. ASTM D 2196 (Brookfield Viscometer - Thermosel, about 10 grams)

⁵ ASTM D 3461, Mettler, 1 °C/minute.

⁶ Density of Powder Coating Materials, The Powder Coating Institute. Recommended Procedure #4.

⁷ ASTM D 1726 (Hydrolyzable Chloride Content of Liquid Epoxy Resins)

⁸ At time of manufacture.

⁹ Determined by Differential Scanning Calorimetry (DSC).

FDA Status

Paragraph 175.300 in Title 21 of the Code of Federal Regulations permits and regulates the use of epoxy resins such as cured EPON Resin 2005 as indirect food additives in food contact applications.

Curing agents and catalysts for EPON Resin coating systems are also regulated under several sections of Title 21, for example 175.300 and 177.2280, and are subject to the limitations imposed by these sections and the general requirements of good manufacturing practices. Consult these sections for specific examples.

Identification and Classification

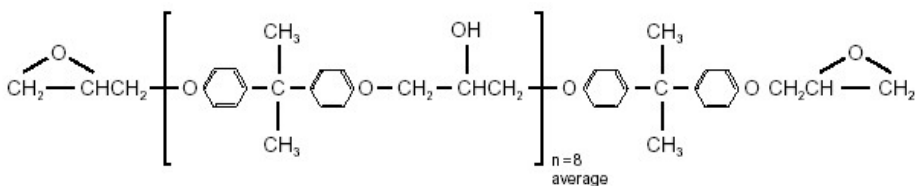
Chemical Abstract Service Registry Number:

CAS No. 25036-25-3 (EPA Inventory designation)

Chemical Designation:

- Phenol,4,4'-(1-methylethylidene)bis-,
- polymer with 2,2'-[(1-methylethylidene)
- bis (4,1-phenyleneoxymethylene)] bis[oxirane]

Structural formula, base resin:



Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Please refer to the Hexion web site for Shelf Life and recommended Storage information.

EPON Resin 2005 is a stable material produced in a free flowing particulate form and packaged in a 50-pound net bag specifically designed and sealed to prevent moisture

pickup. This product is not prone to sintering or “blocking;” however, it should be stored in an area where the temperature does not exceed 100 °F

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and where it is protected against moisture.

EPON Resin 2005 is not a hazardous material according to Department of Transportation regulations (Code of Federal Regulations, Title 49).

EPON Resin 2005 is also available in flexible intermediate bulk containers (FIBC's) holding 2000 pounds net of solid resin. The weighing accuracy of a 2000 pound container is \pm 0.5 percent.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

Packaging

Available in bulk and drum quantities.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

For literature and technical assistance, visit our website at www.hexion.com