



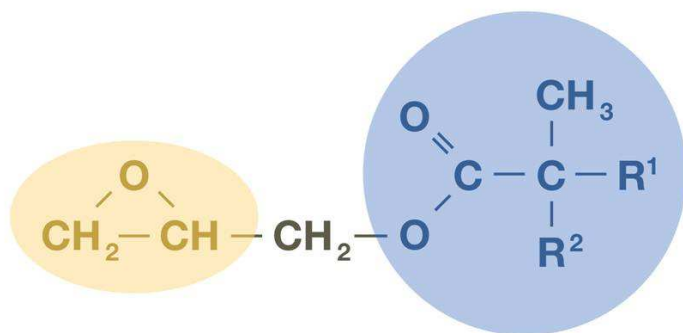
Technical Data Sheet

Re-issued January 2015

Cardura™ E10P Glycidyl Ester

Description

Cardura™ E10P glycidyl ester of Versatic™ Acid 10, a synthetic saturated monocarboxylic acid of highly branched C₁₀ isomers. Its structure may be represented as:



R¹ and R² are alkyl groups. Cardura E10P glycidyl ester is a liquid product with a low viscosity, and a mild odour.

Applications

Cardura E10P glycidyl ester is used as an intermediate for the manufacture of resins and polymers and for different chemical syntheses via reactions with its epoxide group. Its unique reaction characteristics and properties make Cardura E10P glycidyl ester attractive for a wide variety of paint applications, particularly those based on polyesters, acrylics and epoxy resins.

Cardura E10P glycidyl ester is also used as a reactive diluent for epoxy resins based on bisphenol A, bisphenol F or blends of these two. Typical applications for Cardura E10P glycidyl ester diluted resins are solvent-free coatings curing at ambient temperature and compositions for the civil engineering industry, including floorings and concrete repair compounds. Cardura E10P glycidyl ester has good wetting characteristics and offers better crystallization resistance and improved chemical resistance in the diluted resin compared to many other diluents.

Sales Specification

Property	Test method	Unit	Value
Epoxy group content*	SMS 2026	mmol/kg	4100 - 4250
Color	ASTM D1209	Pt-Co	35 max
Water content	ASTM D4672	%m/m	0.1 max
Appearance	Visual		Clear liquid, free from suspended matter

*Epoxy Equivalent Weight, 235 – 244 g/mol

Typical Properties

Property	Test method	Unit	Value
Molecular formula (main product)			C ₁₃ H ₂₄ O ₃
Viscosity at 25°C	ASTM D445	mPa.s	7.13
at 100°C		mPa.s	1.31
at 125°C		mPa.s	0.94
at 150°C		mPa.s	0.72
Density at t (when 15°C = t = 40°C)	ASTM D4052	kg/L	0.9760-0.00065 t

Vapour pressure at 37.8°C	ASTM D323	kPa	0.9
Specific heat at 25°C	ASTM D3418	kJ/kg °C	1.733
Boiling range 5%-90% (v/v) at 101.3 kPa	ASTM D86	°C	251-278
Flash point (PMCC)	ASTM D93	°C	126
Solidification point	ASTM D97	°C	below -60
Solubility of Cardura E10P in water at 20°C		%m/m	0.01
Solubility of water in Cardura E10P at 20°C		%m/m	0.7
Thermal conductivity at 25°C		W/m°C	0.142

Test Methods

ASTM Standards are published by the American Society for Testing and Materials, 100 Barr Harbor Drive, west Conshohocken, PA 19428-2959, USA or can be found under www.astm.org.

ISO standards are published under the supervision of the International Standards Organisation and are available from National Standards Institutes.

SMS methods mentioned are available from Hexion Europe B.V.

Transportation and Storage

Information on transport, storage, suitable materials for tank construction, etc. is available from Hexion, via local representative or distributor. Cardura should be stored at ambient temperature (min 5 °C - max 50 °C) in conditions such that moisture is excluded, in the original containers kept tightly closed. Under these conditions the shelf life should be three years starting from the manufactured date.

Handling Precautions

For more detailed information on all aspects relating to Health, Safety and Handling, reference should be made to the Safety Data Sheet of Cardura E10P glycidyl ester, which is available from your local Hexion representative or distributor. The precautions advised therein should be strictly observed.

Contact Information

For contact information about this product, go to www.hexion.com and visit Versatic Derivatives product pages. Here you will have option to choose your region to find a representative in your area.

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