Technical Datasheet

INEOS Composites

DERAKANE™ 610 C-150 Epoxy Vinyl Ester Resin

DERAKANE 610 C-150 Resin is a novel new epoxy vinyl ester resin designed for infused infrastructure applications where a degree of fire retardancy[1] is required in the end use application. Used as is, infused parts made with DERAKANE 610 C-150 Resin have acheived Class II flame spread results as measured by ASTM E-84 test protocols.

(1) The fire retardancy and flame spread data were obtained from controlled and/or small scale bench tests and the results apply specifically to the specimens tested, in the manner tested. They are not necessarily perdictive of product performance in a real fire situation. DERAKANE resins are organic materials and the fabricated products constructed from them will burn under the right conditions of heat and oxygen supply. This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

Typical[2] Liquid Resin Properties

Properties of DERAKANE 610 C-150 Epoxy Vinyl Ester Resin at 25°C (77°F)	Value	Unit
Viscosity Brookfield, LVT	130	mPa·s (cps)
Non-Volatile Content	51.6%	
Specific Gravity	1.07	gm/cc

[2] Properties are run at 25°C (77°F) unless otherwise stated. Properties are typical values based on materials tested in our laboratories, but vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot.

Typical[2] Curing Charactieristics

1.25 Parts MEKP / 100 Parts of 610 C-150 Resin	Value
Room Temperature Gel Time (minutes)	29
Gel to Peak Exotherm (minutes)	27
Peak Exotherm	143°C / 294°F

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Clear Casting Mechanical Properties[3]

Tensile Strength	71 MPa	10,308 psi	ISO 527 / ASTM D638
Tensile Modulus	3530 MPa	512 ksi	ISO 527 / ASTM D638
Flexural Strength	129 MPa	18,739psi	ISO 178 / ASTM D790
Flexural Modulus	3920 MPa	568 ksi	ISO 178 / ASTM D790
Heat Distortion Temperature	76°C	169°F	ISO 75 / ASTM D648

[3]Cure schedule: 0.2 gms 6% Co and 1.25 gms NOROX (ME)KP 925H (United Initiators) per 100 gms resin. Cured at room temperature for 24 hours. Post cured at 60 C for 24 hours. NOROX (ME)KP 925H, (ME) used in NA name, but not elsewhere.

Certificates and Approvals

The manufacturing, quality control and distribution of products, by INEOS Composites, comply with one or more of the following programs or standards: ISO 9001, Responsible Care, ISO 14001 and OHSAS 18001.

Standard Package

205 Kg (452 lb) Net Weight Steel Drum
DOT Label Requirement: Flammable Liquid

Commercial Warranty

Three months from date of shipment, when stored in accordance with the storage conditions stated below.

Storage

Drums - Store at temperatures below 25°C (77°F). Storage life decreases with increasing storage temperature. Avoid exposure to heat such as direct sunlight or steam pipes. To avoid contamination of the product with water, do not store outdoors. Keep sealed to prevent moisture pick-up and monomer loss. Mild mixing is recommended after prolonged storage. Rotate stock.

Bulk - Refer to INEOS Composites's Bulk Storage and Handling Manual for Polyesters and Vinyl Esters. A copy of this may be obtained from INEOS Composites at 1-614-790-3333 or 1-800-523-6963.

All other conditions being equal, higher storage temperatures will reduce product stability and

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lower storage temperature will extend product stability.

Notice

All information presented herein is believed to be accurate and reliable, and is solely for the user's consideration, investigation and verification. The information is not to be taken as an express or implied representation or warranty for which INEOS Composites assumes legal responsibility. Any warranties, including warranties of merchantability, fitness for use or non-infringement of intellectual property rights of third parties, are herewith expressly excluded.

Since the user's product formulations, specific use applications and conditions of use are beyond the control of INEOS Composites, INEOS Composites makes no warranty or representation regarding the results which may be obtained by the user. It shall be the sole responsibility of the user to determine the suitability of any of the products mentioned for the user's specific application.

INEOS Composites requests that the user reads, understands and complies with the information contained herein and the current Material Safety Data Sheet.

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