

## DION® FR 840-820 E HET Acid Based Fire Retardant Resin

**DESCRIPTION**

**DION® FR 840-820 E** is a halogenated fire retardant laminating polyester resin containing fillers. The resin is accelerated and thixotropic.

**DION® FR 840-820 E** has a relatively high viscosity due to the amount of filler added. The resin can be laminated by hand lay-up or spray-up equipment.

**TYPICAL PROPERTIES**

**PHYSICAL DATA IN LIQUID STATE AT 23°C**

Properties	Unit	Value	Test method
Viscosity - Brookfield LVF sp. 2/12 rpm - Cone & Plate	mPa·s(cP) mPa·s(cP)	1700 - 2000 400 - 500	ASTM D 2196-86 ISO 2884-1999
Density	g/cm <sup>3</sup>	1.45 - 1.50	ISO 2811-2001
Styrene content	% weight	24 ± 2	B 070
Flash point	°C	32	ASTM D 3278-95
Gel time: 1% NORPOL PEROXIDE 1 (MEKP)	minutes	50 - 100	G020
Storage stability from date of manufacture	months	6	G180

**TYPICAL MECHANICAL PROPERTIES**

Fully post cured

Properties	Unit	Value	Test method
Tensile strength	MPa	43	ISO 527-1993
Tensile modulus	MPa	6500	ISO 527-1993
Tensile elongation	%	0.8	ISO 527-1993
Flexural strength	MPa	75	ISO 178-2001
Flexural modulus	MPa	5500	ISO 178-2001
Heat distortion temp.	°C	93	ISO 75-1993
FIRE TESTS - Laminate : 30-35% Glass fibre Oxygen index (approx.) - NPF 92-501 - NFF 16-101	%	> 36 Class M 1 Class F 2	ISO 4589-1996

The information herein is general information designed to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to contents and suitability for their specific applications. We warrant that our products will meet our written specifications. **Nothing herein shall constitute any other warranty express or implied, including any warranty of merchantability or fitness for a particular purpose,** nor is any protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is limited to replacement of our materials and in no event shall we be liable for special, incidental or consequential damages.

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February 01, 2006  
**DION® 840 – 820 E**

**RECOMMENDED PEROXIDE**

All DION® & POLYLITE® products are Quality Controlled with the specified Peroxide. However, alternatives are available and all users should be aware that a single Peroxide formulation cannot provide optimum results in all resin systems. The interaction between the Peroxide and the inhibitor/accelerator systems used in our products is complex and varies from resin to resin. Consequently the gel and cure characteristics provided by alternate Peroxide can vary greatly from those specified. It is, therefore, absolutely essential that the user evaluate each alternate Peroxide in each product before full-scale manufacture is started.

Through thorough laboratory work we have found that some types of Peroxide formulation (such as the acetyl acetones) can lead to distinct cured color variation. We would, therefore, strongly recommend the use of single peroxide (NORPOL Peroxide No.1 / Butanox M-50) especially where consistent light colors are required for the finished articles.

Safety Data Bulletin No.2 applies to DION® 840-820 E.

**STORAGE**

To ensure maximum stability and maintain optimum resin properties, POLYLITE® resins should be stored in closed containers at temperatures below 25°C and away from heat sources and sunlight. All storage areas and containers should conform to local fire and building codes. Drum stock should be stored away from all sources of flame or combustion. Inventory levels should be kept to a reasonable minimum with first-in, first-out stock rotation.

**PACKAGING FORM**

Non-returnable 220 kg metal drums or returnable 1000 kg plastic containers.  
20 kg pails may be delivered on request.  
ISO Road Tanker are available with approximately 24Tons supply.

**SAFETY****READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET BEFORE WORKING WITH THIS PRODUCT**

Obtain a copy of the material safety data sheet on this product prior to use. Material safety data sheets are available from your Reichhold sales representative. Such information should be requested from suppliers of all products and understood prior to working with their materials.

**DIRECTLY MIXING ANY ORGANIC PEROXIDE WITH A METAL SOAP, AMINE, OR OTHER POLYMERIZATION ACCELERATOR OR PROMOTER WILL RESULT IN VIOLENT DECOMPOSITION.**

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