

# DION® FR 840-820

## DESCRIPTION

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

DION® FR 840-820 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	mPa·s(cP)	1400-1800	ASTM D 2196-86
- Cone & Plate	mPa·s(cP)	400-500	ISO 2884-1999
Density	g/cm <sup>3</sup>	1.45-1.50	ISO 2811-2001
Styrene content	% weight	24 ± 2	B070
Flash point	°C	32	ASTM D 3278-95
Gel time: 1% NORPOL PEROXIDE 1 (MEKP)	minutes	20-30	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
<b>FIRE TESTS</b>			
Laminate : 30-35% Glassfibre			
Oxygen index (approx.)	%	> 36	ISO 4589-1996
- NPF 92-501		Class M 1	
- NFF 16-101		Class F 2	

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.

**STORAGE**

To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 24°C/75°F and away from heat ignition sources and sunlight. Resin should be warmed to at least 18°C/65°F prior to use in order to assure proper curing and handling. All storage areas and containers should conform to local fire and building codes. Copper or copper containing alloys should be avoided as containers. Store separate from oxidizing materials, peroxides and metal salts. Keep containers closed when not in use. Inventory levels should be kept to a reasonable minimum with first-in, first-out stock rotation.

Additional information on handling and storing unsaturated polyesters is available in Reichhold's application bulletin "Bulk Storage and Handling of Unsaturated Polyester Resins." For information on other Reichhold resins or initiators, contact your sales representative or authorized Reichhold distributor.

**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**