

DION® FR 850-800 E
Iso Fire Retardant Resin

DESCRIPTION

DION® FR 850-800 E is a fire retardant Isophthalic polyester resin containing aluminumtrihydrate (ATH) is specially suitable for the production of articles where reduced smoke emission in addition to fire retardant properties is required. Resin meets BS 476 part 7 Class 2 requirement.

DION® FR 850-800 E is accelerated, thixotropic and has a viscosity that ensures thorough glass fiber impregnation. Built-in accelerator system gives relatively long gel time, rapid curing combined with relatively low exothermic temperature and short de-molding time.

DION® FR 850-800 E is extra stabilized for prolonged shelf life at elevated temperature and geltime adjusted for comfortable process time even at higher ambient temperature,

APPLICATION

DION® FR 850-800 E is suitable for hand lay-up and spray-up application as well as machine processing. Prolonged storage or unfavorable storing conditions may cause some separation, hence agitation of the resin before use is recommended.

DION® FR 850-800 E is design for marine, industrial and transport application with recommended laminate thicknesses applied wet-on-wet: 3 – 8 mm

FEATURES

BENIFITS

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| <ul style="list-style-type: none"> • Excellent application properties • Moderate Viscosity • Medium reactivity • Extra stabilized • Statistically process and quality controlled by ISO 9000-2000 | <ul style="list-style-type: none"> • Short application time and good fiber wetting • Ensures fast and thorough glass fiber impregnation, reduces risk of dry patches. • Good curing and low Exotherm ensures quick demolding time and faster production. • Prolong Storage Stability and suitable for high ambient work shop temperature. • Batch-to-batch consistency. |
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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.

919-990-7500 • 800-448-3482 • P.O. Box 13582, Research Triangle Park, NC 27709 USA • 2400 Ellis Road, Durham, NC 27703 USA • www.reichhold.com

Reichhold, P.O. Box 2061, N-3202 Sandefjord, Norway, Tel. +47 33 44 86 00, Fax + 47 33 44 86 01
Reichhold Inc. PO Box: 16911, JAFZ, Dubai, UAE. Tel. +971 4 8835215, Fax +971 4 8835887

February 01, 2006
DION® 850 – 800 E

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)	350-400	ISO 2884-1999
Density	g/cm ³	1.32	ISO 2811-2001
Acid number (max.)	mgKOH/g	10	ISO 2114-1996
Styrene content	% weight	31 ± 2	B070
Flash point	°C	32	ASTM D 3278-95
Gel time: 1% NORPOL PEROXIDE 1	minutes	50 - 100	G020
Storage stability from date of manufacture	months	6	G180

TYPICAL NON-REINFORCED CASTING PROPERTIES

Fully post cured

Properties	Unit	Value	Test method
Tensile strength	MPa	55	ISO 527-1993
Tensile modulus	MPa	6500	ISO 527-1993
Tensile elongation	%	1.2	ISO 527-1993
Flexural strength	MPa	90	ISO 178-2001
Flexural modulus	MPa	6200	ISO 178-2001
Impact strength, P 4 J	mJ/mm ²	7.5	ISO 179-2001
Volume shrinkage	%		ISO 3521-1997
Heat distortion temp.	°C	88	ISO 75-1993
Hardness Barcol	934-1	50	ASTM D 2583-87
FIRE TESTS; Laminate: 30-35% Glass fiber			
- Oxygen index (approx.)	%	25	ISO 4589-1996
- Average ext. of burning (AEB)	mm	10	ASTM D 635-98
- Average time of burning (ATB)	sec.	60	ASTM D 635-98
- Surface spread of flame		Class 2	BS 476 part 7 1997

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DION® 850 – 800 E**RECOMMENDED PEROXIDE**

All POLYLITE® & DION® 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. 1 applies to DION® 850 – 800 E.

STORAGE

To ensure maximum stability and maintain optimum resin properties, DION® or 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**
- **Non-returnable 20.0 kg metal pails**

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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