

DION® 9400

DESCRIPTION

DION® 9400 is a non-accelerated, novalac epoxy based vinyl ester resin. This highly crosslinked resin has a high heat distortion temperature and exceptional chemical resistance, particularly towards chlorine containing media and organic solvents. Typical uses are filament winding and hand lay-up of reinforced plastic tanks, pipes and process equipment. The high heat distortion temperature makes it outstanding in high temperature applications.

TYPICAL PROPERTIES

PHYSICAL DATA IN LIQUID STATE AT 23°C

Properties	Unit	Value	Test method
Viscosity			
- Brookfield LVF sp. 2/30 rpm	mPa's(cP)	300-550	ASTM D 2196-86
- ICI Cone & Plate	mPa's(cP)	350-550	ISO 2884-1999
Density	g/cm ³	1.06-1.10	ISO 2811-2001
Acid Value	mgKOH/g	max. 13	ISO 2114-1996
Styrene Content	% weight	34-38	B070
Flash Point	°C	32	ASTM D 3278-95
Gel time: 3% Acc. 9802 (1% Co) 2% NORPOL PEROXIDE 11	minutes	20-30	G020
Storage stability from date of manufacture	months	6	G180

TYPICAL GEL TIMES WITH VARYING CURING SYSTEMS AT 23°C

Curing system	A	B	C	D	E
DION® 9400	100	100	100	100	100
Cobalt (1%)	3	3	2	2	2
DMA (10%)	-	-	0.5	0.5	0.3
TBC (10%)	-	0.2	-	0.2	-
PEROXIDE 11	2	2	2	2	2
Gel time, minutes	25	36	23	36	25

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.

TYPICAL CLEAR CASTING PROPERTIES AT 23°C

Properties	Unit	Value	Test method
Tensile Strength	MPa	72	ISO 527-1993
Tensile Modulus	MPa	3700	ISO 527-1993
Tensile Elongation	%	2.5-3.0	ISO 527-1993
Flexural Strength	MPa	130	ISO 178-2001
Flexural Modulus	MPa	3600	ISO 178-2001
Heat Distortion Temperature	°C	135	ISO 75-1993
Hardness, Barcol 934-1	-	45	ASTM D 2583-99
Water Absorption (28 days)	%	0.90	ISO 62-1999

TYPICAL LAMINATE* PROPERTIES AT 23°C

Properties	Value	Unit	Test method
Glass Content	33	%	ISO 1172-1996
Tensile Strength	105	MPa	ISO 527-1993
Tensile Modulus	7650	MPa	ISO 527-1993
Tensile Elongation	2.0	%	ISO 527-1993
Flexural Strength	170	MPa	ISO 178-2001
Flexural Modulus	7100	MPa	ISO 178-2001

* 5 mm laminate, 6 x 450 g/m² CSM

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