Technical data sheet

March 2018

DION® 9500

Rubber Modified Vinyl Ester Resin

DESCRIPTION

DION® 9500 is a non-accelerated, rubber-modified epoxy based vinyl ester resin. This resin possesses a unique combination of properties as high tensile elongation, good toughness, low shrinkage, low peak exotherm, excellent adhesion properties and good chemical resistance. These properties make this vinyl ester well suited as primer and for constructions subjected to dynamic loads.

APPLICATION

DION® 9500 is intended for hand lay-up but may also be recommended as primer on high density, cross-linked PVC foam and carbon steel.

FEATURES	BENEFITS
• Rubber modified epoxy vinyl ester resin	• Good chemical resistance to a wide variety of corrosive environments
• High strength and toughness	• Good mechanical properties • High elongation and good crack resistance • Good fatigue resistance
• Excellent hydrolytic stability	• Very low water absorption
• Low viscosity	• Improved glass fibre wet-out
• Good curing	• Good final cure even with long gel times
• Approvals	• Det norske Veritas, DNV-GL – Grade 1 • Lloyds Register of Shipping

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)	 500-750 550-750	 ASTM D 2196-86 ISO 2884-1999
Density	g/cm³	1.02-1.06	ISO 2811-1:2016
Acid value	mgKOH/g	max. 8	ISO 2114-2000
Styrene content	% weight	38-42	B070
Flash point	°C	32	ASTM D 3278-96 (2011)
Gel time: 2% Acc. 9802 (1% Co.) 0,5% Acc. 9826 (DMA 10%) 2% Butanox® LPT-IN	 min.	 20-30	 G020
Storage stability from date of manufacture	months	6	G180

Other brands of MEKP with high dimer content have also been used successfully. Since variations in the MEKP compositions for different products may occur, geltimes and reactivity may slightly vary and it is recommended to evaluate the initiator characteristics prior to fabrication. In order to avoid foaming, peroxide of type NORPOL® Peroxide 24/Norox® CHM-50 or Trigonox® 239 should be used. In addition, a thorough evaluation of initiator characteristics is suggested prior to fabrication. Information on other curing systems is available upon request.

TYPICAL CLEAR CASTING PROPERTIES AT 23°C

Properties	Unit	Value	Test method
Tensile strength	MPa	70	ISO 527-2:2012
Tensile modulus	MPa	3100	ISO 527-2:2012
Tensile elongation	%	9	ISO 527-2:2012
Flexural strength	MPa	135	ISO 178-2010
Flexural modulus	MPa	3000	ISO 178-2010
Heat distortion temperature	°C	87	ISO 75-2:2013
Hardness, Barcol 934-1	-	35	ASTM D 2583-13a
Water absorption (28 days)	%	0.55	ISO 62-2008

TYPICAL LAMINATE* PROPERTIES

Properties	Unit	Value	Test method
Glass content	%	33	ISO 1172-1996
Tensile strength	MPa	135	ISO 527-2:2012
Tensile modulus	MPa	7600	ISO 527-2:2012
Tensile elongation	%	2.3	ISO 527-2:2012
Flexural strength	MPa	215	ISO 178-2010
Flexural modulus	MPa	7350	ISO 178-2010

* 5 mm laminate, 6 x 450 g/m² CSM

STORAGE

Store in the shade, out of direct sunlight. Keep storage temperature below 25° C. Unseal container just before use. Shelf life will be reduced reaching higher temperature.

SAFETY

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

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