REICHHOLD

PRODUCT BULLETIN

October 2012

HYDREX® 200-M800

Isophthalic /NPG resin

DESCRIPTION

HYDREX® 200-M800 is a low reactive isophthalic/neopenthylglycol polyester resin with generally good mechanical properties, impact strength in particular.

HYDREX® 200-M800 gives high tensile elongation and very low water absorption compared to conventional isophthalic and iso/NPG polyester resins.

HYDREX® 200-M800 is an LSE variant of HYDREX® 200-800 and has substantially reduced styrene evaporation due to special additives.

APPLICATION

HYDREX® 200-M800 is especially formulated to give an optimal bonding to glass- and aramide fibre, and is recommended for constructions subjected to high static and/or dynamic loads.

HYDREX® 200-M800 is thixotropic and pre-accelerated and is suited for hand lay-up and spray-up application.

HYDREX® 200-M800 has been formulated with an accelerator system giving low peak exotherm, and is adjusted for laminate thicknesses 4-8 mm applied wet-on-wet.
When laminating on insulating materials (e.g. sandwich constructions) a laminate thickness of 2-5 mm is recommended.

FEATURES	BENEFITS
• High strength and toughness	• Good mechanical properties • High elongation and good crack resistance • Good fatigue resistance
• Excellent hydrolytic stability	• Very low water absorption
• Versatile	• Suitable for hand lay-up and spray-up
• Excellent compatibility to reinforcements	• Compatible with both glass and aramide fibres
• Low styrene emission	• LSE grade giving reduced styrene emission during application and curing
• Approvals	• Det norske Veritas, DNV; Grade 1

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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)	 900-1100 270-300	 ASTM D 2196-86 ISO 2884-1999
Density	g/cm³	1.06 ± 0.02	ISO 2811-2001
Acid number (max.)	mgKOH/g	8-15	ISO 2114-1996
Styrene content	% weight	47 ± 2	B070
Flash point	°C	32	ASTM D 3278-95
Gel time: 1% NORPOL® PEROXIDE 1	minutes	35-45	G020
Peak exotherm	°C	38-50	*
Storage stability from date of manufacture	months	6	G180

* Heat generation read in 5 mm mat laminate on insulating material.

TYPICAL NON-REINFORCED CASTING PROPERTIES

Fully post-cured.

Properties	Unit	Value	Test method
Density	g/cm²	1.16	
Tensile Strength	MPa	73	ISO 527-1993
Tensile Modulus	MPa	3100	ISO 527-1993
Tensile Elongation	%	6.5	ISO 527-1993
Flexural Strength	MPa	135	ISO 178-2001
Flexural Modulus	MPa	3000	ISO 178-2001
Impact Strength, Charpy P4J	mJ/mm²	18	ISO 179-2001
Heat Distortion Temperature	°C	83	ISO 75-1993
Water Absorption after 28 days in dist.water	%	0.50	ISO 62-1999
Hardness, Barcol 934-1	-	35	ASTM D 2583-99

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