REICHHOLD

PRODUCT BULLETIN

September 2012

DION® 9600-20

Bisphenol-Epoxy Vinyl Ester Resin

DESCRIPTION

DION® 9600-20 is a non-accelerated, thixotropic, flexible epoxy based vinyl ester resin. DION® 9600-20 is for CIPP applications such as pressure pipe requiring higher strength and toughness as compared to conventional vinyl ester resins.

APPLICATION

Cured-In-Place Pipe (CIPP)

FEATURES	BENEFITS
• Premium epoxy vinyl ester polymer	• Tough, impact resistant laminates
• Excellent wet-out of glass or felt tubes	• Reduces air entrapment and yields improved mechanical properties.
• High tensile elongation	• Maximum translation of of fiber properties
• Manufactured using statistical process control in ISO 9002-certified plants	• Consistent batch-to-batch performance
• Stabilized Resin System	• Improved Shelf Stability

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.

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TYPICAL PROPERTIES

TYPICAL LIQUID PROPERTIES AT 25°C/77°F

Properties	Unit	Value	Test Method
NV	%	64.5 - 68.5	18-001/B070
Viscosity Brookfield Model RVF, Spindle # 4 at 20 rpm	Cps	2,500 – 3,500	18-021/ASTM D 2196-86
Thix Index - RVF Spindle # 4 at 2/20 rpm		3.0 - 4.0	18-021/ASTM D 2196-86
Gel Test At 140°F with; 1.0 g styrene + 1.0 g Perkadox* 16 + 0.5 g Trigonox* C per 100 g resin	minutes	35 - 45	18-097 ‡
Total Time to Peak Exotherm at 140°F	Minutes	40 - 55	18-097 ‡
Peak Exotherm at 140°F	° F	270 - 300	18-097 ‡
Spec. Gravity/Density	g/cm³	1.04 - 1.10	18-030 / ISO 2811-2001
Flash point (Seta Closed Cup)	°C/°F	32/89	
Shelf Life Maximum	Months	6	

*Perkadox and Trigonox are registered trademarks of Akzo Nobel

‡ Special gel test, run with a Sunshine Gel Meter, 3 inches of catalyzed resin in a 19 x 150 mm Test Tube at 140º F.

TYPICAL NON REINFORCED MECHANICAL PROPERTIES AT 25°C/77°F
1/8" Clear Casting

Properties	Unit	Value	Test Method
Tensile Strength	psi	7,000	ASTM D 638-02
Tensile Modulus	psi	350,000	ASTM D 638-02
Tensile Elongation	%	8.0	ASTM D 638-02
Flexural Strength	psi	13,000	ASTM D 790-02
Flexural Modulus	psi	330,000	ASTM D 790-02
Barcol Hardness, 934-1		25	ASTM D-2583
Heat Distortion Temperature	°C/°F	60/140	ASTM D-648

STORAGE

To ensure maximum stability and maintain optimum resin properties, resins should be stored in the original closed container at temperature 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, additives or initiators, contact your sales representative or authorized Reichhold distributor.

SHELF LIFE

Shelf life is 6 months from date of shipment. Minimum shelf life performance refers to product in the original, unopened container.

STANDARD PACKAGE

This product is available in non-returnable 215 kg, 55-gallon metal drums or 42,000 – 44,000-lb. tank truck.

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 or contact the Reichhold service center 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 DECOMPOSTION. WHEN ADDING ORGANIC PEROXIDES TO A RESIN SOLUTION, PROMPTLY AND THOROUGHLY MIX THE RESULTING PRODUCT. NEVER ADD ORGANIC PEROXIDES TO A HOT DILUENT OR PROCESS. PREVENT CONTAMINATION WITH FOREIGN MATERIALS, INCLUDING WITHOUT LIMITATION, ACCELERATORS (SUCH AS DIMETHYL, ANILINE, OTHER AMINES OR COBALT COMPOUNDS), HEAVY-METAL OXIDES OR SALTS (PARTICULARLY THOSE OF COBALT, IRON AND COPPER), STRONG ACIDS AND SANDING DUSTS. USE CLEAN CONTAINERS MADE OF GLASS, POLYPROPYLENE, TEFLON, POLYETHYLENE, OR CERAMIC TO PREVENT CONTAMINATION OF ORGANIC PEROXIDES DURING ITS HANDLING.

TECHNICAL SUPPORT

Reichhold's technical support staff has extensive practical experience with various composites resins, end use performance and manufacturing techniques. Please do not hesitate to request our assistance through your Reichhold sales or technical representative.

Copies of test methods used to determine reported properties are available through your Reichhold representative.

Each user must determine the suitability of this product to his/her particular mode of operation and intended end use application. A Reichhold representative will be available to assist in the proper selection of all Reichhold products available for commercial use.

Properties reported in this bulletin are typical of those obtained in controlled laboratory tests and may vary in actual production; therefore, we require our customers to inspect and test our products before using them to satisfy themselves as to contents and suitability. 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 protection from any law or patent to be inferred.**

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