

DION® 31031-01
 Medium-High Reactivity Pultrusion Resin

DESCRIPTION

DION® 31031-01 is a UV stable, resilient isophthalic polyester resin designed for the pultrusion process. Composite profiles produced with this resin system are crack and craze resistant.

APPLICATIONS

Structural shapes, ladders, tool handles, cross arms

FEATURES

BENEFITS

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| <ul style="list-style-type: none"> • High strength and toughness • UV Stabilized • Components conform to FDA 177.2420, Title 21 • Medium-High reactivity • Manufactured using statistical process and quality controls | <ul style="list-style-type: none"> • Excellent resistance to impact cracking • High flexural strength • Suitable for pultruding complex shapes • Improved UV resistance • Properly fabricated parts may be used in food contact applications • Fast line speeds • High Gloss • Consistent performance, batch to batch |
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SIMILAR RESINS

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| <ul style="list-style-type: none"> • POLYLITE 31516-00 • DION 31020-03 • DION 31031-00 | <ul style="list-style-type: none"> • Medium-high reactivity resilient terephthalic • High reactivity rigid isophthalic • Resilient isophthalic |
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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.

PROPERTIES

PHYSICAL DATA IN LIQUID FORM AT 25°C (77°F) DION® 31031-01*

Properties	Unit	Value	Test method
Non-Volatiles, NV	%	65	18-001/B070
Viscosity - Brookfield Model RV, Spindle 2 at 20 rpm	cps	1,000 – 1,200	18-021/ASTM D 2196-86
Thix Index		Not Available	18-021/ASTM D 2196-86
Weight per gallon	lbs	9.15 - 9.46	
Specific gravity/Density	g/cm ³	1.1 - 1.14	18-030/ISO 2811-2001
SPI Gel **	minutes	4.0 - 4.5	18-050
SPI Cure **	minutes	1.0 - 2.0	18-050
SPI Peak **	°C / °F	223 / 433	18-051
Flash point (Seta Closed Cup)	°C / °F	32 / 89	ASTM D 3278-95
Shelf life, minimum	months	3	

** Catalyzed with 1.0% BPO crystals

TYPICAL MECHANICAL PROPERTIES*

Clear Casting

Properties	Unit	English	Metric	Test method
Tensile Strength	psi	10,600		ASTM D 638-02
	MPa		73	ISO 527-1993
Tensile Modulus	kpsi	462		ASTM D 638-02
	MPa		3186	ISO 527-1993
Tensile Elongation at break	%	4.9		ASTM D 638-02
	%		4.9	ISO 527-1993
Flexural Strength	psi	21,000		ASTM D 790-02
	MPa		145	ISO 178-2001
Flexural Modulus	kpsi	500		ASTM D 790-02
	MPa		3448	ISO 178-2001
Heat Deflection Temperature	°F	176		ASTM D 648
	°C		80	ISO 75-1993

**Properties in this bulletin are typical of those obtained in controlled laboratory tests and are provided as guidelines.*

HANDLING AND CURING

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 the **REICHHOLD** application bulletin "Bulk Storage and Handling of Unsaturated Polyester Resins." For information on other **REICHHOLD** resins, 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

