



MFE 702-01 is a high performance vinyl ester resin for prepreg, which has fast curing speed, it is designed for hot melt production of carbon/glass/quartz fiber prepregs for automotive, marine, photovoltaic, sports and leisure applications.

FEATURES

- ◆ Excellent chemical resistance, especially to most acids, alkalis, salt solutions and some solvents
- ◆ Low water absorption, resistance to moisture and heat
- ◆ High light transmittance of products made with glass fiber
- ◆ Low viscosity, sticky-free, easy to operate
- ◆ Fast curing speed, 5-8min fast curing at 140 °C

APPLICATIONS

- ◆ Suitable for hot-melt production of carbon fiber/glass fiber/quartz fiber prepregs

LIQUID RESIN PROPERTIES ⁽¹⁾

Property	Range	TM
Appearance	Yellow solid	Visual
Viscosity, cps (70 °C)	28000 - 45000	ISO 2555
Acid Value,mgKOH/g	8.0 ± 4.0	ISO 2114
Solid Content, %	≥99	ISO 3233
Epoxy Equivalent, g/mol	≤15000	ISO 3001

PROPERTIES ⁽¹⁾ OF PURE RESIN CASTING

Property	Value	TM
Tensile Strength, MPa	80 - 90	ASTM D638
Tensile Modulus, GPa	3.5- 3.8	ASTM D638
Tensile Elongation, %	3.5 - 5.0	ASTM D638
Flexural Strength, MPa	130 - 150	ASTM D790
Flexural Modulus, GPa	3.5 - 3.8	ASTM D790
Water Absorption (24h, 25 °C), %	0.1 - 0.15	ASTM D570
HDT (1.8 MPa), °C	100 - 110	ASTM D648

PROPERTIES ⁽¹⁾ OF LAMINATES ⁽³⁾

Property	Value	TM
0° Tensile Strength, MPa	2050	ASTM D3039
0° Tensile Modulus, GPa	138.5	ASTM D3039
90° Tensile Strength, MPa	42.3	ASTM D3039
90° Tensile Modulus, GPa	11.6	ASTM D3039
0° Flexural Strength, MPa	1650	ASTM D7264
0° Flexural Modulus, GPa	116.4	ASTM D7264

MFE® 702-01

90° Flexural Strength, MPa	71	ASTM D7264
90° Flexural Modulus, GPa	9.6	ASTM D7264
Interlayer shear strength, MPa	90.5	ASTM D2344

(1) Typical property values only, not to be construed as specifications.

(2) Unopened drum with no additives, promoters, accelerators, etc. added. Shelf life specified from date of manufacture.

(3) The laminate is Toray T700 carbon fiber.

RECOMMENDED PROCESS SYSTEM

- ◆ Prepreg Preparation: Coating temperature is 75 ± 5 °C, Impregnation temperature: 95 - 105 °C.
- ◆ Curing system: 140 °C, 5 - 8 min, can be adjusted according to the actual working conditions of the molding process conditions, molding time and thickness of the heat transfer fast and slow relationship.

TESTING CONDITIONS

Temperature: 25 °C. Relative moisture: 50 ± 5 %.

PACKING&STORAGE

Net weight 30Kg/ctn. The storage environment should be cool and dry, the storage period under 25 °C is 2 months, the storage period under 0 °C is 6 months, the storage period under -18 °C is 12 months., Improper storage or transportation conditions will cause a shortening of the resin's storage period. The products shall comply with the provisions on the storage, transportation, loading and unloading of hazardous chemicals in the Regulations on the Safety Management of Hazardous Chemicals of the State Council. It is recommended to transport resin by refrigerated truck.

MATERIAL SAFETY

A Material Safety Data Sheet of this product is available on request.

TEST METHODS

Test methods (TM) referred to in the table(s) are available on request.

SINO POLYMER is a leading manufacturer of epoxy vinyl ester resin, unsaturated polyester, epoxy resin, polysulphone, coating and adhesives since year 1958, with its headquarter and plant located in Shanghai Chemical Industry Park, P.R. China. The company's Total Quality Management Gene's guaranty sustainable product & service quality, lead time and competitiveness, as the Safety & Security Management, Improvement Process, R&D and International developments make Sino Polymer a sustainable partner on long term.

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