



MFE® 707N

MFE 707N epoxy vinyl ester resin is a brominated novolac-epoxy based vinyl ester developed for the application where need both corrosion resistance and high temperature resistance with excellent fire retardance.

## FEATURES

- Excellent corrosion resistance and high temperature resistance properties with good toughness and reduced flammability
- Laminates made with MFE 707N resin meet ASTM E-84 Flame Spread "Class 2" rating (less than 75). 3% of antimony oxide ( $\text{Sb}_2\text{O}_3$ ), Class 1 ratings can be achieved <sup>(1)</sup>
- High performance against wet or dry chlorine gas, chlorine dioxide, bleach, and hot, wet flue gas environments

## APPLICATIONS

- Suitable for FRP ductwork, Stacks and stack liner applications, equipment specified to handle mixtures of air and hot gases or potentially flammable and corrosive liquids, and floorings compounds where a high degree of heat and /or fire resistance is needed
- Suitable for the FRP fabrication processes such as filament winding, hand lay-up, spray-up, pultrusion and infusion (RTM)

## LIQUID RESIN PROPERTIES <sup>(2)</sup>

| Property                                  | Value                           | TM       |
|---|---------------------------------|----------|
| Appearance                                | Light yellow transparent liquid | Visual   |
| Viscosity, cps (25 °C)                    | 400 ± 100                       | ISO 2555 |
| Density, g/cm <sup>3</sup>                | 1.22 ± 0.02                     | ISO 1675 |
| Solid Content, %                          | 62.0 ± 3.0                      | ISO 3233 |
| Shelf Life <sup>(3)</sup> , Dark, (25 °C) | 4 months                        |          |

## PROPERTIES OF PURE RESIN CASTING <sup>(2)</sup>

| Property               | Value     | TM         |
|------------------------|-----------|------------|
| Tensile Strength, MPa  | 70 - 80   | ASTM D638  |
| Tensile Modulus, GPa   | 3.3 - 3.6 | ASTM D638  |
| Tensile Elongation, %  | 3.5 - 5.0 | ASTM D638  |
| Flexural Strength, MPa | 125 - 135 | ASTM D790  |
| Flexural Modulus, GPa  | 3.4 - 3.8 | ASTM D790  |
| Barcol hardness        | 40 - 45   | ASTM D2583 |
| HDT (1.8 MPa), °C      | 128 - 137 | ASTM D648  |

(1) The fire retardancy and flame spread data were obtained from controlled and/or small scale bench tests and the results apply specifically to the specimens tested, in the manner tested. They are not necessarily predictive of product performance in a real fire situation. MFE resins are organic materials and the fabricated products constructed from them will burn under the right conditions of heat and oxygen supply. This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

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

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

## TESTING CONDITIONS

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

## PACKING

Net weight 20 Kg / iron drum, 200 Kg / iron drum, 1000 Kg / IBC tank.

## STORAGE

The storage environment should be dry and ventilated. The storage period below 25 °C is 4 months, Improper storage or transportation conditions will cause a shortening of the resin's storage period. It is recommended to transport resin by refrigerated truck when the temperature exceeds 35 °C, and transport it at night to avoid direct sunlight.

## 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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