

# MFE® -9

Vinyl Ester

Huachang Polymer Co., Ltd.

## Message:

MFE-9 Vinyl Ester Resin is a rubber modified resin with high toughness, and based on Bisphenol-A epoxy vinyl ester resin.

### PROPERTY

Low solid contractibility, high toughness, high ductility

Excellent fatigue resistance, impact resistance and cleavage resistance

Excellent adhesion and abrasion resistance, excellent impact strength.

Excellent penetration-proof and hermetically seal.

### APPLICATION

Used in making flooring, daubing material, sealing material and interface layer of FRP lining

Used in manufacturing helmet for aviation, automobile race and military use, short sled, sailing boat and high performance racing boat

Excellent adhesion, can be used for special tackiness agent

Used with fiber and other reinforced materials, give excellent strength and fatigue resistance property to lamination

| General Information        |                             |      |             |
|----------------------------|-----------------------------|------|-------------|
| Additive                   | Rubber                      |      |             |
| Features                   | Ductile                     |      |             |
|                            | Fatigue Resistant           |      |             |
|                            | Good Adhesion               |      |             |
|                            | Good Toughness              |      |             |
|                            | Heat Sealable               |      |             |
|                            | High Impact Resistance      |      |             |
|                            | Puncture Resistant          |      |             |
| Uses                       | Adhesives                   |      |             |
|                            | Automotive Applications     |      |             |
|                            | Flooring Maintenance/Repair |      |             |
|                            | Laminates                   |      |             |
|                            | Safety Helmets              |      |             |
|                            | Sealants                    |      |             |
| Appearance                 | Yellow                      |      |             |
| Physical                   | Nominal Value               | Unit |             |
| Solids Content             | 55 to 63                    | %    |             |
| Thermal Stability (80°C)   | > 1                         | day  |             |
| Gel Time (25°C)            | 22.0 to 38.0                | min  |             |
| Peak Exotherm              | 120 to 140                  | °C   |             |
| Mechanical                 | Nominal Value               | Unit | Test Method |
| Tensile Modulus            | 2400                        | MPa  | ASTM D638   |
| Tensile Strength           | 60.0                        | MPa  | ASTM D638   |
| Tensile Elongation (Break) | 11                          | %    | ASTM D638   |

|   |               |                   |             |
|---|---------------|-------------------|-------------|
| Flexural Modulus  | 2800          | MPa               | ASTM D790   |
| Flexural Strength                                       | 110           | MPa               | ASTM D790   |
| Compressive Strength                                    | 115           | MPa               | ASTM D695   |
| Impact  | Nominal Value | Unit              | Test Method |
| Tensile Impact Strength                                 | 25.0          | kJ/m <sup>2</sup> | ASTM D6110  |
| Thermal   | Nominal Value | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 80.0          | °C                | ASTM D648   |
| Thermoset   | Nominal Value | Unit              |             |
| Thermoset Mix Viscosity (25°C)                          | 300 to 500    | cP                |             |

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

