# Vipel® F007-AAA-00

Vinyl Ester

AOC, L.L.C.

## Message:

Vipel Corrosion Resistant, Low VOC, Bisphenol A, Epoxy Vinyl Ester Resin
AOC's Vipel F007 is a low VOC, bisphenol A epoxy-based vinyl ester resin dissolved in styrene.
Versatile
The Vipel F007 Series is ideally suited for use in hand lay-up, spray-up, filament winding and pultrusion processes where outstanding mechanical properties and excellent resistance to chemicals and heat are required. Wide formulating capabilities allow for use in many processes and for optimization of cost/performance.
Corrosion resistance
Refer to AOC's "Corrosion Resistant Resin Guide under product F007" for corrosion resistance information. For questions regarding suitability of a resin to any particular chemical environment, contact AOC.
Food and Drug
All resins in this datasheet are manufactured from raw materials that are listed in FDA regulation Title 21 CFR 177.2420. It is the fabricator's responsibility to also be sure that the final composite is well cured. All composites used for FDA applications should be post cured at 180°F/82°C for at least 4 hours. After post curing, laminate should be washed with soap and water and rinsed.

| General Information | |
|---|---|
| Features | Food Contact Acceptable<br>Good Corrosion Resistance |
| Uses | Coating Applications<br>Filaments |
| Agency Ratings | FDA 21 CFR 177.2420 |
| Forms | Liquid |
| Processing Method | Filament Winding<br>Hand Lay-up<br>Pultrusion<br>Spraying |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 1.07 | g/cm³ | |
| Styrene Content | 32 | % | |
| Exotherm | | | |
| Gel to Peak | 7.0 | min | |
| Peak | 188 | °C | |
| Gel Time (25°C) [1] | 25.0 | min | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Barcol Hardness | 44 | | ASTM D2583 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 3590 | MPa | ASTM D638 |
| Tensile Strength (Yield) | 95.1 | MPa | ASTM D638 |

| | | | |
|---|---|---|---|
| Tensile Elongation (Break) | 5.1 | % | ASTM D638 |
| Flexural Modulus | 3860 | MPa | ASTM D790 |
| Flexural Strength | 163 | MPa | ASTM D790 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 130 | °C | ASTM D648 |
| Thermoset | Nominal Value | Unit | |
| Thermoset Mix Viscosity [2] (25°C) | 400 | cP | |
| Post Cure Time (82°C) | 4.0 | hr | |
| NOTE | | | |
| 1. | Gel time with 0.2% Cobalt 6%, 0.05% DMA and 1.25% MEKP | | |
| 2. | Brookfield RV viscosity spindle 2 at 20 rpm | | |



## Recommended distributors for this material

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