

Vipel® F085-CCC-00

Vinyl Ester

AOC, L.L.C.

Message:

Vipel Corrosion Resistant Epoxy Novolac, Vinyl Ester Resin

The Vipel F085 series is an epoxy novolac vinyl ester resin dissolved in styrene. The Vipel F085 series is ideally suited for applications where outstanding mechanical properties and resistance to chemicals, oxidation and heat are required.

Corrosion resistance

The epoxy novolac backbone chemistry provides resistance to acids and bases and has superior resistance to many organic solvents. Vipel F085 series is generally resistant to liquids and vapors at higher temperatures than standard bisphenol-A epoxy vinyl ester resins.

The Vipel F085 series is well suited for use in the field of chlorine-alkali electrolysis. Refer to AOC's "Corrosion Resistant Resin Guide" for corrosion resistance information or for questions regarding suitability of a resin to any particular chemical environment contact AOC.

Mechanical Properties

The Vipel F085 series is suitable for moldings that are subjected to particularly high static and dynamic loads. It is resistant to internal stress cracking under high loading.

Versatile

Suitable for various fabricating methods such as hand lay-up, filament winding, etc.

| General Information | | | |
|------------------------------|----------------------------------|-------------------|-------------|
| Features | Acid Resistant | | |
| | Base Resistant | | |
| | Good Chemical Resistance | | |
| | Good Corrosion Resistance | | |
| | High ESCR (Stress Crack Resist.) | | |
| | High Heat Resistance | | |
| | Oxidation Resistant | | |
| | Solvent Resistant | | |
| Uses | Filaments | | |
| Forms | Liquid | | |
| Processing Method | Filament Winding | | |
| | Hand Lay-up | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.06 | g/cm ³ | |
| Styrene Content | 40 | % | |
| Exotherm | | | |
| Gel to Peak | 7.0 | min | |
| Peak | 216 | °C | |
| Gel Time (25°C) ¹ | 12.0 | min | |
| Hardness | Nominal Value | Unit | Test Method |
| Barcol Hardness | 44 | | ASTM D2583 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 3720 | MPa | ASTM D638 |

| | | | |
|---|---------------|------|-------------|
| Tensile Strength (Yield) | 77.2 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 3.3 | % | ASTM D638 |
| Flexural Modulus | 3720 | MPa | ASTM D790 |
| Flexural Strength | 148 | MPa | ASTM D790 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 149 | °C | ASTM D648 |
| Thermoset | Nominal Value | Unit | |
| Thermoset Mix Viscosity ² (25°C) | 100 | cP | |
| NOTE | | | |

1. Gel time with 0.3% cobalt 6%,
0.05% DMA and 1.5% MEKP
2. Brookfield RV viscosity spindle 2 at
20 rpm

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Recommended distributors for this material

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

