# Derakane® 510C-350

Vinyl Ester

Ashland Performance Materials

## Message:

DERAKANE 510C-350 resin is a brominated vinyl ester resin that offers a high degree of fire retardance while providing the excellent chemical resistance and toughness typical of DERAKANE resins. Optimum fire retardance is achieved when antimony compounds are added to the resin. DERAKANE 510 C-350 resin provides resistance to a wide range of acids, alkalis, bleaches and organic compounds for use in many chemical processing industry applications.

APPLICATIONS AND USE

Equipment fabricated with DERAKANE 510C-350 resin resists mechanical and chemical damage which enables it to be used in various caustic environments such as sodium hypochlorite, chlorine dioxide and alkaline hydrogen peroxide. It is also suitable for equipment specified to handle mixtures of air and hot gases, building panels, and flooring compounds where a degree of fire retardance is required. It is also recommended for use in FRP ductwork, stacks and stack-liner applications.

DERAKANE 510C-350 resin is designed for ease of fabrication using hand lay-up, spray-up, filament winding, compression molding, resin transfer molding techniques and pultrusion.

| General Information | |
|---|---|
| Features | Good chemical resistance<br>alkali resistance<br>acid resistance<br>Good toughness<br>brominated<br>Flame retardancy |
| Uses | Laminate<br>Floor Material<br>Building materials |
| Agency Ratings | ASTM E 84 Class 2 |
| Forms | Liquid |
| Processing Method | Filament power winding<br>pultrusion<br>Hand coating<br>Resin transfer molding<br>Compression molding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Solution Viscosity | 400 | mPa·s | |
| Styrene Content | 35 | % | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Barcol Hardness | 35 | | ASTM D2583 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | | | |

| | | | |
|---|---|---|---|
| -- | 3170 | MPa | ASTM D638 |
| -- | 3200 | MPa | ISO 527-2 |
| Tensile Strength | | | |
| -- | 82.7 | MPa | ASTM D638 |
| -- | 86.0 | MPa | ISO 527-2 |
| Tensile Elongation (Yield) | 5.0 - 6.0 | % | ASTM D638, ISO 527-2 |
| Flexural Modulus | | | |
| -- | 3380 | MPa | ASTM D790 |
| -- | 3400 | MPa | ISO 178 |
| Flexural Strength | | | |
| -- | 152 | MPa | ASTM D790 |
| -- | 150 | MPa | ISO 178 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | |
| 1.8 MPa, not annealed | 104 | °C | ASTM D648 |
| 1.8 MPa, not annealed | 105 | °C | ISO 75-2/A |
| Glass Transition Temperature | | | |
| -- | 121 | °C | ASTM D3418 |
| -- | 120 | °C | ISO 11357-2 |
| Additional Information | | | |
| Properties of clear casting at 25°C. | | | |



## Recommended distributors for this material

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