

Solvay Specialty Polymers Veradel® 3400 Polyethersulfone (PESU) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyethersulfone (PES)

Material Notes:

Veradel 3400 polyethersulfone (PESU) is a high melt flow, transparent grade that offers high heat deflection temperatures, excellent toughness and dimensional stability, and resistance to steam, boiling water and mineral acids. Other desirable properties include thermal stability, creep resistance and inherent flame resistance. Veradel 3400 is designed for easy molding of parts with thin walls or long flow lengths. It is FDA compliant and is therefore approved for direct food contact. Three other grades are available: Veradel 3200, a low melt flow grade that can be processed by extrusion or injection molding; Veradel 3300, a medium melt flow grade suggested for general purpose injection molding and Veradel 3600, a very high melt flow grade suggested for compounding, especially of glass or carbon fiber reinforced compounds. This grade was formerly marketed as Gafone™ PESU Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Veradel-3400-Polyethersulfone-PESU-nbspUnverified-Data.php

| Physical Properties | Metric | English | Comments |
|-----------------------------|--------------------------------------|--------------------------------------|--------------------|
| Specific Gravity | 1.37 g/cc | 1.37 g/cc | ASTM D792 |
| Water Absorption | 1.9 % | 1.9 % | 30 days; ASTM D570 |
| | 0.50 % | 0.50 % | ASTM D570 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Flow | 0.0060 cm/cm | 0.0060 in/in | ASTM D955 |
| Melt Flow | 42 g/10 min | 42 g/10 min | ASTM D1238 |
| | @Load 2.16 kg, Temperature 380 °C | @Load 4.76 lb, Temperature 716 °F | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|------------|----------------|-----------|
| Tensile Strength | 88.9 MPa | 12900 psi | ASTM D638 |
| Elongation at Yield | 6.5 % | 6.5 % | ASTM D638 |
| Tensile Modulus | 2.69 GPa | 390 ksi | ASTM D638 |
| Flexural Strength | 125 MPa | 18100 psi | ASTM D790 |
| Flexural Modulus | 2.62 GPa | 380 ksi | ASTM D790 |
| Izod Impact, Notched | 0.530 J/cm | 0.993 ft-lb/in | ASTM D256 |

| Thermal Properties | Metric | English | Comments |
|-------------------------------|--------------|----------------|-----------|
| CTE, linear, Parallel to Flow | 52.0 µm/m-°C | 28.9 µin/in-°F | ASTM D696 |

| Thermal Properties | Metric | English | Comments |
|---|--------------------|----------------------|-----------|
| Deflection Temperature at 1.8 MPa (264 psi) | | | ASTM D648 |
| Flammability, UL94 | V-0 | V-0 | UL 94 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |

| Optical Properties | Metric | English | Comments |
|-----------------------|--------|---------|---------------------------------------|
| Transmission, Visible | 90 % | 90 % | transparent; thickness not quantified |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-----------------------|-----------------------|-----------|
| Volume Resistivity | 1.70e+15 ohm-cm | 1.70e+15 ohm-cm | ASTM D257 |
| Dielectric Constant | 3.5 | 3.5 | ASTM D150 |
| | @Frequency 1000 Hz | @Frequency 1000 Hz | |
| | 3.51 | 3.51 | |
| | @Frequency 60.0 Hz | @Frequency 60.0 Hz | ASTM D150 |
| | 3.54 | 3.54 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Dielectric Strength | 15.0 kV/mm | 381 kV/in | ASTM D149 |
| Dissipation Factor | 0.0017 | 0.0017 | ASTM D150 |
| | @Frequency 60.0 Hz | @Frequency 60.0 Hz | |
| | 0.0022 | 0.0022 | |
| | @Frequency 1000 Hz | @Frequency 1000 Hz | ASTM D150 |
| | 0.0056 | 0.0056 | ASTM D150 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |

| Descriptive Properties | Value | Comments |
|------------------------|-----------------------------|---|
| Agency Ratings | NSF 61 | Tested at 82 °C (180 °F) (Commercial Hot) |
| Appearance | Transparent - Slight Yellow | |
| Availability | Africa & Middle East | |
| | Asia Pacific | |
| | Europe | |
| | North America | |

| Descriptive Properties | South America Value | Comments |
|------------------------|------------------------------------|----------|
| Features | Acid Resistant | |
| | Flame Retardant | |
| | General Purpose | |
| | Good Adhesion | |
| | Good Chemical Resistance | |
| | Good Creep Resistance | |
| | Good Dimensional Stability | |
| | Good Thermal Stability | |
| | Good Toughness | |
| | High Heat Resistance | |
| | High Tensile Strength | |
| | Hydrolysis Resistant | |
| | Medium Flow | |
| | Medium Molecular Weight | |
| | Medium Rigidity | |
| Forms | Pellets | |
| Generic | PESU | |
| Processing Method | Compounding | |
| | Injection Molding | |
| RoHS Compliance | RoHS Compliant | |
| Uses | Appliance Components | |
| | Appliances | |
| | Automotive Electronics | |
| | Batteries | |
| | Business Equipment | |
| | Electrical Parts | |
| | Electrical/Electronic Applications | |

| Descriptive Properties | Value | Comments |
|------------------------|---------------------------|----------|
| | Food Service Applications | |
| | Industrial Applications | |
| | Microwave Cookware | |

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