# Virantage® VW-10300 P, FP & SFP

## polyethersulfone

Virantage® VW-10300 polyethersulfone (PESU) is a non-functionalized, high-temperature sulfone polymer powder. Three grades are offered: Virantage® VW-10300P, Virantage® VW-10300FP, and Virantage® VW-10300SFP providing three particle sizes to meet formulators' specific needs. Their inherent toughness imparts damage tolerance to thermoset composites. Virantage® PESU polymers also offer superior thermal and hydrolytic stability that deliver best-in-class hot-wet performance.

These amorphous thermoplastics may be used to toughen a variety of advanced thermoset composites used to produce high-performance aerospace components. Virantage® PESU tougheners have been used successfully in a variety of thermosetting resin systems including epoxies, phenolics and BMIs.

All Virantage® PESU polymers are produced at Solvay's state-of-the-art, world-scale facility in Panoli, India under ISO 9001:2000 and ISO 14001:2004 certified quality management systems.

# Virantage® VW-10300 P, FP & SFP
polyethersulfone

| General | | |
|---|---|---|
| Material Status | • Commercial: Active | |
| Availability | • Africa & Middle East<br>• Asia Pacific<br>• Europe | • Latin America<br>• North America |
| Features | • Amorphous<br>• Good Thermal Stability<br>• Good Toughness<br>• High Heat Resistance | • Hydrolytically Stable<br>• Medium Molecular Weight<br>• Medium-high Viscosity |
| Uses | • Aerospace Applications | |
| RoHS Compliance | • Contact Manufacturer | |
| Forms | • Powder | |
| Processing Method | • Compounding | |

| Physical | Typical Value | Unit | Test method |
|---|---|---|---|
| Solution Viscosity [1] | 800 | mPa·s | Internal Method |
| Moisture - Measured at time of packaging [2] | 1.0 | % | Internal Method |
| Particle Size [3] | | | |
| VW-10300FP | 63.0 | µm | |
| VW-10300P | 500 | µm | |
| VW-10300SFP | 45.0 | µm | |
| Residual Solvent - Measured by Gas Chromatography | 0.20 | % | Internal Method |

| Thermal | Typical Value | Unit | Test method |
|---|---|---|---|
| Glass Transition Temperature | 220 | °C | DSC |

**Notes**

Typical properties: these are not to be construed as specifications.

[1] 25% solution in DMAc at 40°C

[2] Virantage® PESU is hygroscopic and may absorb moisture in storage.
Dry no higher than 130°C for a minimum of 3 hours if needed.

[3] Typical Particle Size ~D90
Particle sizes by sieve measurement