

Virantage® VW-10700 RP, RFP, RSFP polyethersulfone

Virantage® VW-series functionalized polyethersulfones (r-PESU) are amorphous, high-temperature sulfone polymers featuring reactive end groups to enhance solubility and improve interfacial properties in epoxy thermosets. Their inherent toughness imparts damage tolerance to thermoset composites and excellent flexibility to coatings. Virantage® polymers also offer superior thermal and hydrolytic stability that delivers best-in-class hot-wet performance.

They are especially suitable for incorporation into advanced composite resin systems used to produce high-performance aerospace components and have been

used successfully in a variety of thermosetting resin systems including epoxies, phenolics, and BMIs.

Virantage® VW-series polymers are available in a range of molecular weights: high (10200), medium (10300) and low (10700). A range of particle sizes are also available to meet formulators' specific needs.

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-10700 RP, RFP, RSFP
polyethersulfone

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Features	• Amorphous • Good Thermal Stability • Good Toughness • High Heat Resistance	• Hydrolytically Stable • Low Molecular Weight • Low Viscosity
Uses	• Aerospace Applications	
RoHS Compliance	• Contact Manufacturer	
Forms	• Pellets	
Processing Method	• Coating	• Compounding

Virantage® VW-10700 RP, RFP, RSFP

polyethersulfone

Physical	Typical Value	Unit	Test method
Solution Viscosity ¹	560	mPa·s	Internal Method
Average Molecular Weight ²	21000	g/mol	Internal Method
Moisture - Measured at time of packaging ³	1.5	%	Internal Method
OH End Groups - Measured by titration of end groups	210	µeq/g	Internal Method
Particle Size ⁴			
VW-10700RFP	75.0	µm	
VW-10700RP	500	µm	
VW-10700RSFP	45.0	µm	
Residual Solvent - Measured by Gas Chromatography	0.15	%	Internal Method

Thermal	Typical Value	Unit	Test method
Glass Transition Temperature	216	°C	DSC

Notes

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

¹ 35% solution in DMAc at 40°C

² Gel Permeation Chromatography with polystyrene as standard

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

⁴ Typical Particle Size ~D90

Particle sizes by sieve measurement

www.solvay.com

SpecialtyPolymers.EMEA@solvay.com | Europe, Middle East and Africa

SpecialtyPolymers.Americas@solvay.com | Americas

SpecialtyPolymers.Asia@solvay.com | Asia and Australia

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

Neither Solvay Specialty Polymers nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Solvay's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Solvay's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.

All trademarks and registered trademarks are property of the companies that comprise the Solvay Group or their respective owners.

© 2019 Solvay Specialty Polymers. All rights reserved.