

Wacker Silicones Geniomer® 200 Silicone TPE Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Silicone, Thermoplastic

Material Notes:

SLM TPSE 200 is a silicone copolymer containing over 90% siloxane. Geniomer® is a two phase block copolymer made up of a soft polydimethylsiloxane (PDSM) phase and a hard aliphatic isocyanate phase. On account of its structure and the high siloxane content, the material is highly flexible and combines excellent transparency with good mechanical properties. SLM TPSE 200 contains neither plasticizers nor reinforcing fillers. It can be processed using standard thermoplastic processing techniques, and is particularly suitable for injection molding because of its low melt viscosity. The high siloxane content prevents impairment of the elastomeric properties at low temperatures. SLM TPSE 200 can be coated with solvent-based paints, some of which may require the use of a suitable primer. Severe mechanical deformation of the elastomer may cause cracks in the coating due to the limited flexibility of the paint. Suggested applications: Production of industrial elastomeric components (including thin-walled components) Processing aid for plastics extrusion Hydrophobic, breathable textile coatings Information provided by Wacker Silicones.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Wacker-Silicones-Geniomer-200-Silicone-TPE-Elastomer.php

Physical Properties	Metric	English	Comments
Density	0.980 - 1.00 g/cc	0.0354 - 0.0361 lb/in ³	
Water Absorption at Saturation	<= 0.30 %	<= 0.30 %	By Thermogravimetry
Viscosity	50000 - 500000 cP	50000 - 500000 cP	Melt; Oscillating cone-plate
	@Shear Rate 1.00 1/s, Temperature 150 °C	@Shear Rate 1.00 1/s, Temperature 302 °F	
	1.00e+7 - 2.00e+7 cP	1.00e+7 - 2.00e+7 cP	Melt; Oscillating cone-plate
	@Shear Rate 1.00 1/s, Temperature 110 °C	@Shear Rate 1.00 1/s, Temperature 230 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	50 - 55	50 - 55	DIN 53505
Tensile Strength at Break	3.00 - 5.00 MPa	435 - 725 psi	DIN 53504 S2
Elongation at Break	>= 400 %	>= 400 %	DIN 53504 S2
50% Modulus	0.00120 - 0.00140 GPa	0.174 - 0.203 ksi	DIN 53504 S2
100% Modulus	0.00150 - 0.00170 GPa	0.218 - 0.247 ksi	DIN 53504 S2
Tear Strength	20.0 - 30.0 kN/m	114 - 171 pli	Die B; ASTM 624
Compression Set	10 %	10 %	at -18°C; ISO 815
	23 %	23 %	5°C; ISO 815

Mechanical Properties	44 % Metric	44 % English	23°C; ISO 815 Comments
	66 %	66 %	40°C; ISO 815

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.50 - 1.60 J/g-°C	0.359 - 0.382 BTU/lb-°F	DSC
	2.00 - 2.40 J/g-°C @Temperature 200 °C	0.478 - 0.574 BTU/lb-°F @Temperature 392 °F	DSC

Optical Properties	Metric	English	Comments
Refractive Index	1.42 - 1.425	1.42 - 1.425	
Transmission, Visible	90 %	90 %	Transparent; thickness not quantified

Processing Properties	Metric	English	Comments
Processing Temperature	185 - 230 °C	365 - 446 °F	Metering Zone
Feed Temperature	30.0 °C	86.0 °F	
Mold Temperature	20.0 - 40.0 °C	68.0 - 104 °F	
Injection Pressure	2.00 - 50.0 MPa	290 - 7250 psi	Melt Pressure

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