

## DSM Biomedical PurSil® 10 Thermoplastic Silicone Polyether Urethane (discontinued \*\*)

Category : Polymer , Thermoplastic , Polyurethane, TP , Silicone Polyurethane, Ether Based

### Material Notes:

PurSil® thermoplastic siliconepolyether-urethane (TSPU) is a novel copolymer that is strong, yet flexible with proven biocompatibility and biostability. Leveraging the benefits of both silicone elastomers and polyether urethanes, PurSil® TSPU has improved in vitro and in vivo stability. It has been used in medical device applications, including spinal implants and cardiac rhythm management. This polymer is backed by an established FDA Master File.Comparable strength to traditional polyether urethanes (PEU) and added biostability from the silicone co-soft segment and silicone end groups. Adaptable to various fabrication techniques to accommodate many different device shapes. Capable of being extruded and injection or compression molded, as well as solvent bonded, dipped, coated and sprayed. Available in aromatic and aliphatic versionsNon-cytotoxic, Non-hemolytic, Non-genotoxic, nonmutagenic, non-pyrogenic

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Biomedical-PurSil-10-Thermoplastic-Silicone-Polyether-Urethane-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_DSM-Biomedical-PurSil-10-Thermoplastic-Silicone-Polyether-Urethane-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ASTM D792
Linear Mold Shrinkage	0.012 cm/cm	0.012 in/in	4.0 inch Disk; ASTM D955
Linear Mold Shrinkage, Transverse	0.010 - 0.021 cm/cm	0.010 - 0.021 in/in	Flame Bar; ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	81	81	ASTM D2240
Tensile Strength, Ultimate	39.24 MPa	5692 psi	ASTM D1708
Elongation at Break	571 %	571 %	ASTM D1708
Flexural Strength	1.45 MPa	210 psi	at 5% deflection; ASTM D790
Flexural Modulus	0.0371 GPa	5.38 ksi	ASTM D790
Tear Strength	61.4 kN/m	350 pli	Die 'C'; ASTM D624
Taber Abrasion, mg/1000 Cycles	25	25	H-18 Wheel; ASTM D1044
Compression Set	23 % @Temperature 25.0 °C	23 % @Temperature 77.0 °F	22 hours; ASTM D395

Thermal Properties	Metric	English	Comments
CTE, linear	187.3 µm/m-°C @Temperature 20.0 °C	104.1 µin/in-°F @Temperature 68.0 °F	ASTM E-831

Vicat Softening Point Thermal Properties	82.0 °C Metric	180 °F English	ASTM D1525 Comments
Glass Transition Temp, Tg	-68.0 °C	-90.4 °F	ASTM DSC

Electrical Properties	Metric	English	Comments
Dielectric Constant	7.0 @Frequency 60 Hz	7.0 @Frequency 60 Hz	ASTM D150
Dielectric Strength	13.4 kV/mm	340 kV/in	ASTM D149

Processing Properties	Metric	English	Comments
Processing Temperature	182 - 204 °C	360 - 399 °F	Optimum Extrusion Conditions
Drying Temperature	82.0 - 104 °C	180 - 219 °F	
Dry Time	4 - 6 hour	4 - 6 hour	to moisture < 0.01%

Descriptive Properties	Value	Comments
Color	Clear to Amber Pellets	

## Contact Songhan Plastic Technology Co.,Ltd.

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