

DSM Biomedical Elasthane™ 55D Thermoplastic Polyether Polyurethane (TPU)

Category : Polymer , Thermoplastic , Polyurethane, TP , Thermoplastic Polyurethane (TPUR), Polyether Grade

Material Notes:

A high tensile strength, aromatic biomedical polymer with an exceptional combination of mechanical properties plus biological compatibility Elasthane™ TPU exhibits outstanding hydrolytic stability. Widely Used This polyether-based polymer is designed to support long-term implantation and has been used in many commercially available medical devices including cardiovascular, neurostimulation and orthopedic implants. Tailor Made Elasthane™ TPU can be enhanced with SME® technology to incorporate end groups that can address the needs of specific device applications. This eliminates the need for additional surface processing steps after the device component is fabricated. Summary of Product Benefits Excellent mechanical properties and abrasion resistance Hydrolytically stable Biocompatible Adaptable with SME® technology Established FDA Master File Information provided by DSM Biomedical.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Biomedical-Elasthane-55D-Thermoplastic-Polyether-Polyurethane-TPU.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.16 g/cc	1.16 g/cc	ASTM D792
Linear Mold Shrinkage	0.014 cm/cm	0.014 in/in	4 inch disk; ASTM D955
Linear Mold Shrinkage, Transverse	0.0050 - 0.010 cm/cm	0.0050 - 0.010 in/in	Flame Bar; ASTM D955
Melt Flow	13 g/10 min @Load 2.16 kg, Temperature 224 °C	13 g/10 min @Load 4.76 lb, Temperature 435 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	55	55	ASTM D2240
Tensile Strength, Ultimate	54.11 MPa	7848 psi	ASTM D1708
Tensile Stress	11.9 MPa @Strain 50.0 %	1720 psi @Strain 50.0 %	ASTM D1708
	15.0 MPa @Strain 100 %	2170 psi @Strain 100 %	ASTM D1708
	33.7 MPa @Strain 300 %	4890 psi @Strain 300 %	ASTM D1708
Elongation at Break	382 %	382 %	ASTM D1708
Flexural Strength	6.16 MPa	893 psi	at 5% deflection; ASTM D790
Flexural Modulus	0.149 GPa	21.6 ksi	1% Secant Modulus; ASTM D790

Tear Strength Mechanical Properties	137 kN/m Metric	781 pli English	Die °C: ASTM D624 Comments
Taber Abrasion, mg/1000 Cycles	48	48	H-18 Wheel; ASTM D1044
Compression Set	40 % @Temperature 25.0 °C	40 % @Temperature 77.0 °F	22 hours; ASTM D395

Thermal Properties	Metric	English	Comments
CTE, linear	152.2 µm/m-°C @Temperature 20.0 °C	84.56 µin/in-°F @Temperature 68.0 °F	ASTM E-831
Vicat Softening Point	129 °C	264 °F	ASTM D1525

Electrical Properties	Metric	English	Comments
Dielectric Constant	5.2 @Frequency 60 Hz	5.2 @Frequency 60 Hz	ASTM D150
Dielectric Strength	15.2 kV/mm	385 kV/in	ASTM D149

Processing Properties	Metric	English	Comments
Processing Temperature	194 - 210 °C	381 - 410 °F	Optimum Extrusion Conditions

Descriptive Properties	Value	Comments
Color	Clear to Amber pellets	
Cytotoxicity	Non-cytotoxic	
Hemocompatibility	Non-hemolytic	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China