

DSM Biomedical Elasthane™ 80A 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-80A-Thermoplastic-Polyether-Polyurethane-TPU.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.12 g/cc	1.12 g/cc	ASTM D792
Linear Mold Shrinkage	0.045 cm/cm	0.045 in/in	4 inch disk; ASTM D955
Linear Mold Shrinkage, Transverse	0.00 - 0.020 cm/cm	0.00 - 0.020 in/in	Flame Bar; ASTM D955
Melt Flow	17 g/10 min @Load 1.20 kg, Temperature 224 °C	17 g/10 min @Load 2.65 lb, Temperature 435 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	82	82	ASTM D2240
Tensile Strength, Ultimate	43.81 MPa	6354 psi	ASTM D1708
Tensile Stress	3.63 MPa @Strain 300 %	527 psi @Strain 300 %	ASTM D1708
	5.83 MPa @Strain 100 %	845 psi @Strain 100 %	ASTM D1708
	9.51 MPa @Strain 50.0 %	1380 psi @Strain 50.0 %	ASTM D1708
Elongation at Break	603 %	603 %	ASTM D1708
Flexural Strength	1.55 MPa	225 psi	at 5% deflection; ASTM D790
Flexural Modulus	0.0360 GPa	5.22 ksi	1% Secant Modulus; ASTM D790

Mechanical Properties	Metric	English	Comments
	@Temperature 25.0 °C	@Temperature 77.0 °F	ASTM D395

Thermal Properties	Metric	English	Comments
CTE, linear	179.3 µm/m-°C	99.61 µin/in-°F	ASTM E-831
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Vicat Softening Point	100 °C	212 °F	ASTM D1525

Electrical Properties	Metric	English	Comments
Dielectric Constant	6.7	6.7	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	14.3 kV/mm	363 kV/in	ASTM D149

Processing Properties	Metric	English	Comments
Processing Temperature	171 - 197 °C	340 - 387 °F	

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

Contact Songhan Plastic Technology Co.,Ltd.

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