OnFlex™ U 5370A-E0077

Thermoplastic Elastomer

Key Characteristics

Product Description			
OnFlex™ U thermoplastic elastomer compounds are based on thermoplastic polyurethane elastomers (TPE-U). The OnFlex™ U 5300 series are based upon alloys of SEBS and TPU, combining the advantages of both raw materials, for example the good processability and soft haptic of a TPE-S with the excellent mechanical properties and abrasion resistance of a TPE-U. OnFlex™ U 5300 compounds are formulated to deliver very good scratch resistance, a wide hardness range and good chemical resistance.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Abrasion Resistant	• Good Scratch Resistance	• Oil Resistant
Uses	• Automotive Applications • Consumer Applications	• General Purpose • Industrial Applications	• Power/Other Tools
RoHS Compliance	• RoHS Compliant		
Appearance	• Matte Finish		
Forms	• Pellets		
Processing Method	• Calendering	• Film Extrusion	• Injection Molding

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.08 g/cm³	1.08 g/cm³	ISO 1183
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Abrasion Loss	35.0 mm³	35.0 mm³	DIN 53516
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2]			ISO 37
Across Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	2560 psi	17.7 MPa	
Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	2570 psi	17.7 MPa	
Tensile Elongation [2]			ISO 37
Across Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	570 %	570 %	
Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	580 %	580 %	
Tear Strength [3]			ISO 34-1
Across Flow : 73°F (23°C), 0.0787 in (2.00 mm)	270 lbf/in	47.3 kN/m	
Flow : 73°F (23°C), 0.0787 in (2.00 mm)	304 lbf/in	53.3 kN/m	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	70	70	ISO 48-4
Optical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Gloss (60°)	6	6	ISO 2813

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Additional Information	Typical Value (English)	Typical Value (SI)	Test Method
Fogging (212°F (100°C))	1.1 mg	1.1 mg	DIN 75201B
Generic Material Type	Thermoplastic Polyurethane Elastomer (TPU)	Thermoplastic Polyurethane Elastomer (TPU)	
Odor Rating	2.10	2.10	VDA 270

Properties are measured using injection molded plaques.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	212 °F	100 °C
Drying Time	2.0 hr	2.0 hr
Processing (Melt) Temp	338 to 410 °F	170 to 210 °C
Mold Temperature	86 to 140 °F	30 to 60 °C
Injection Rate	Slow	Slow

Notes

[1] Typical values are not to be construed as specifications.

[2] Type 2, 7.9 in/min (200 mm/min)

[3] Method A, Trouser, 20 in/min (500 mm/min)

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