OnFlex™ U 5380A-S0013

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		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.09 g/cm³	1.09 g/cm³	ISO 1183
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Abrasion Resistance	55.0 mm³	55.0 mm³	ISO 47469
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress (100% Strain)	667 psi	4.60 MPa	ISO 37
Tensile Stress (300% Strain)	1510 psi	10.4 MPa	ISO 37
Tensile Stress (Break)	4790 psi	33.0 MPa	ISO 37
Tensile Elongation (Break)	600 %	600 %	ISO 37
Compression Set			ISO 815
73°F (23°C), 72 hr	31 %	31 %	
158°F (70°C), 22 hr	69 %	69 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	80	80	ISO 48-4

Additional Information	Typical Value (English)	Typical Value (SI)
Generic Material Type	Thermoplastic Polyurethane Elastomer (TPU)	Thermoplastic Polyurethane Elastomer (TPU)

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

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Notes

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

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