



OnFlex™ -U 5355A-S0014

Thermoplastic Polyurethane 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 • North America	• South America
Features	• Good Abrasion Resistance	• Oil Resistant	• Scratch 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	1.02 g/cm ³	1.02 g/cm ³	ISO 1183
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Abrasion Resistance	59.0 mm ³	59.0 mm ³	ISO 47469
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress (100% Strain)	334 psi	2.30 MPa	ISO 37
Tensile Stress (300% Strain)	638 psi	4.40 MPa	ISO 37
Tensile Stress (Break)	2130 psi	14.7 MPa	ISO 37
Tensile Elongation (Break)	630 %	630 %	ISO 37
Compression Set (158°F (70°C), 22.0 hr)	80 %	80 %	ISO 815
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore A)	55	55	ISO 868
Additional Properties			

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	86.0 to 140 °F	30.0 to 60.0 °C
Injection Rate	Slow	Slow

Notes

¹ Typical values are not to be construed as specifications.

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CONTACT INFORMATION

Americas

Argentina - Buenos Aires
+0054 11 4200 5917

Brasil - Campinas
+55 19 3206 0561

Mexico - Toluca
+52 722 2790200

United States - Avon Lake
+1 440 930 1000

United States - McHenry
+1 (815) 385-8500

Asia

China - Shenzhen
+86 (0) 755 2969 2888

China - Suzhou
+86 (0) 512 6823 24 38

China - Suzhou
+86 512 6265 2600

Hong Kong -
+852 2690 5332

India - Mumbai
+91 9820 194 220

Taiwan - Yonghe City,
+886 9396 99740

Europe

Germany - Gaggenau
+49 (0) 7225 6802 0

Netherlands - The Netherlands
+31 (0) 165 331 293

Spain - Barbastro (Huesca)
+34 (0) 9 7431 0314

Turkey - Cekmece-Istanbul-Türkiye
+90 (0) 212 549 2256



Beyond Polymers.

Better Business Solutions. SM

www.polyone.com

PolyOne Americas

33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia

No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 (0) 21 5080 1188

PolyOne Europe

2 Rue Melville Wilson
5330 Assesse, Belgium
+32 (0) 83 660 211