



OnFlex™-U 5170D-S0007

Thermoplastic Polyurethane Elastomer

Key Characteristics

Product Description

OnFlex™-U Thermoplastic Elastomer Compounds are based on thermoplastic polyurethane elastomers (TPE-U). The OnFlex™-U 5100 series combines glass fibres with TPE-U to provide outstanding stiffness, abrasion resistance and other unique mechanical properties. OnFlex™-U 5100 compounds are formulated to deliver excellent abrasion resistance, impact resistance, a low coefficient of thermal expansion and excellent mechanical properties.

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Filler / Reinforcement	• Glass Fiber Reinforcement, 20% Filler by Weight		
Features	• Good Abrasion Resistance	• Good Dimensional Stability	• Good Stiffness
Uses	• Automotive Applications • Construction Applications	• Consumer Applications • General Purpose	• Industrial Applications
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.29 g/cm ³	1.29 g/cm ³	ISO 1183
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Flexural Modulus	203000 psi	1400 MPa	ISO 178
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress (Break)	8830 psi	60.9 MPa	ISO 37
Tensile Elongation (Break)	34 %	34 %	ISO 37
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore D)	70	70	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	437 to 482 °F	225 to 250 °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.

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