



OnFlex™ S HF 50A-3S1981

Thermoplastic Elastomer

Key Characteristics

Product Description

OnFlex™-S HF thermoplastic elastomer compounds are based on hydrogenated styrenic block copolymers. This range of compounds utilize a unique, patent pending halogen free flame retardancy system. Furthermore, OnFlex™-S HF compounds offer good mechanical properties, compliance with UL94 V-0, good LOI values, wide hardness range, good processability, and excellent UV stability.

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East	• Europe	• Latin America
Features	• Flame Retardant		
Uses	• Automotive Applications	• Electrical/Electronic Applications	• Industrial Applications
	• Business Equipment	• General Purpose	
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.09 g/cm ³	1.09 g/cm ³	ISO 1183
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress (100% Strain)	160 psi	1.10 MPa	ISO 37
Tensile Stress (300% Strain)	290 psi	2.00 MPa	ISO 37
Tensile Stress (Break)	363 psi	2.50 MPa	ISO 37
Tensile Elongation (Break)	400 %	400 %	ISO 37
Tear Strength	137 lbf/in	24.0 kN/m	ISO 34-1
Compression Set			ISO 815
73°F (23°C), 72 hr	10 %	10 %	
158°F (70°C), 22 hr	40 %	40 %	
212°F (100°C), 22 hr	77 %	77 %	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore A)	50	50	ISO 868
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Comparative Tracking Index	550 V	550 V	IEC 60112
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.06 in (1.5 mm))	V-0	V-0	UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.08 in (2.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.08 in (2.0 mm)	1340 °F	725 °C	
Oxygen Index	36 %	36 %	ISO 4589-2
Additional Information	Typical Value (English)	Typical Value (SI)	
Generic Material Type	Styrenic Thermoplastic Elastomer (TES)	Styrenic Thermoplastic Elastomer (TES)	

Properties are measured using injection molded plaques.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	2.0 hr	2.0 hr
Processing (Melt) Temp	320 to 356 °F	160 to 180 °C
Mold Temperature	86 to 122 °F	30 to 50 °C
Injection Rate	Moderate-Fast	Moderate-Fast

Notes

¹ Typical values are not to be construed as specifications.



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