



# OnFlex™ S FR 50A-3S1831 Deep Black Thermoplastic Elastomer

## Key Characteristics

### Product Description

OnFlex™ S FR thermoplastic elastomer compounds are based on hydrogenated styrenic block copolymers. This range of compounds are specially flame retarded with a highly effective, RoHS compliant halogen based flame retardant system. Furthermore, OnFlex™ S FR compounds offer excellent mechanical properties, good elevated temperature compression set performance, very wide hardness range and good processability.

### General

Material Status	• Proprietary and/or Private		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant • Halogenated		
Uses	• Automotive Applications • Business Equipment	• Electrical/Electronic Applications • General Purpose	• Industrial Applications
Agency Ratings	• UL QMFZ2 .E76261		
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

## Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.20 g/cm <sup>3</sup>	1.20 g/cm <sup>3</sup>	ISO 1183
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress (100% Strain)	218 psi	1.50 MPa	ISO 37
Tensile Stress (300% Strain)	522 psi	3.60 MPa	ISO 37
Tensile Stress (Break)	914 psi	6.30 MPa	ISO 37
Tensile Elongation (Break)	510 %	510 %	ISO 37
Compression Set (158°F (70°C), 22 hr)	35 %	35 %	ISO 815
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore A)	50	50	ISO 868
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.0591 in (1.50 mm))	V-0	V-0	UL 94
Glow Wire Flammability Index 0.0787 in (2.00 mm)	1760 °F	960 °C	IEC 60695-2-12
Oxygen Index	27 %	27 %	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)
Processing (Melt) Temp	392 to 428 °F	200 to 220 °C
Mold Temperature	104 to 140 °F	40.0 to 60.0 °C
Injection Rate	Fast	Fast

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**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

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