



# OnFlex™ HT 70A-3S2103

## Thermoplastic Elastomer

### Key Characteristics

#### Product Description

OnFlex™ HT thermoplastic elastomer compounds are based on hydrogenated styrenic block copolymers. This range of compounds is specially formulated to deliver very good compression set performance at elevated temperatures and a high heat resistance. Furthermore, OnFlex™ HT compounds offer excellent mechanical properties, a wide hardness range and good processability.

#### General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• High Heat Resistance	• Low Compression Set	• Ozone Resistant
Uses	• Pipe Seals		
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

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

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.00 g/cm <sup>3</sup>	1.00 g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage - Flow 73°F (23°C), 0.0787 in (2.00 mm)	0.015 to 0.019 in/in	1.5 to 1.9 %	Internal Method
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress <sup>2</sup>			DIN 53504
Across Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	1360 psi	9.40 MPa	
Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	1090 psi	7.50 MPa	
Tensile Elongation <sup>2</sup>			DIN 53504
Across Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	800 %	800 %	
Flow : Break, 73°F (23°C), 0.0787 in (2.00 mm)	630 %	630 %	
Tear Strength	211 lbf/in	37.0 kN/m	ISO 34-1
Compression Set			ISO 815
14°F (-10°C), 22 hr	43 %	43 %	
73°F (23°C), 72 hr	25 %	25 %	
158°F (70°C), 22 hr	40 %	40 %	
212°F (100°C), 22 hr	51 %	51 %	
Stress Relaxation			ISO 3384
73°F (23°C) <sup>3</sup>	23 %	23 %	
73°F (23°C) <sup>4</sup>	15 %	15 %	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness			DIN 53505
Shore A, 3 sec, 73°F (23°C), 0.236 in (6.00 mm), Injection Molded	70	70	
IRHD Hardness	78	78	ISO 48

Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec <sup>-1</sup>	71.2 Pa·s	71.2 Pa·s	
392°F (200°C), 11200 sec <sup>-1</sup>	18.6 Pa·s	18.6 Pa·s	
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	356 to 428 °F	180 to 220 °C
Mold Temperature	86 to 140 °F	30 to 60 °C
Injection Rate	Fast	Fast

### Notes

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

<sup>2</sup> 7.9 in/min (200 mm/min)

<sup>3</sup> 100d, 25% compression, Method A

<sup>4</sup> 168hrs, 25% compression, Method A



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