OnFlex™ HT 70A-3S2103 black UV

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.

- Improved UV stability

General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific	• Europe	• North America
Features	• High Heat Resistance • Low Compression Set	• Ozone Resistant • UV Stabilized	
Uses	• Automotive Exterior Parts		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.00 g/cm³	1.00 g/cm³	ISO 1183
Molding Shrinkage - Flow [2]			Internal Method
0.0787 in (2.00 mm), Injection Molded	0.017 in/in	1.7 %	
Molding Shrinkage - Across Flow [2]			Internal Method
0.0787 in (2.00 mm), Injection Molded	0.014 in/in	1.4 %	
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3]			ISO 37
Across Flow : Break	1740 psi	12.0 MPa	
Flow : Break	1380 psi	9.50 MPa	
Tensile Elongation [3]			ISO 37
Across Flow : Break	950 %	950 %	
Flow : Break	700 %	700 %	
Tear Strength	211 lbf/in	37.0 kN/m	ISO 34-1
Compression Set			ISO 815
73°F (23°C), 72 hr	25 %	25 %	
158°F (70°C), 22 hr	40 %	40 %	
212°F (100°C), 22 hr	51 %	51 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	70	70	ISO 7619
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	70.0 Pa·s	70.0 Pa·s	
392°F (200°C), 11200 sec^-1	15.0 Pa·s	15.0 Pa·s	

Additional Information	Typical Value (English)	Typical Value (SI)	Test Method
Generic Material Type	Styrenic Thermoplastic Elastomer (TES)	Styrenic Thermoplastic Elastomer (TES)	
Weather Resistance [4]	expected to pass PV 3929	expected to pass PV 3929	Internal Method

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

[1] Typical values are not to be construed as specifications.

[2] Sign convention:
Positive shrinkage factor: Ejected part is smaller than the mould cavity. Shrinkage after processing is dependent on tool design, wall thickness and processing conditions.
Due to the multitude of factors influencing shrinkage during the processing users should only treat this as a guide and should make their own assessment.
Generally, low processing temperatures will cause an increase in shrinkage of up to 1% (direction of flow). Part geometry may further influence shrinkage by gradually releasing strain.
This may be accelerated by the annealing of parts, such as for 1hr at 80 °C.

[3] 7.9 in/min (200 mm/min)

[4] UV-Package succesfully tested acc. to PV 3929 (Kalahari-Test) on a 60 Sh A Version.

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