

OnFlex™ HT 50A-3S2099

Thermoplastic Elastomer

PolyOne Corporation

Message:

OnFlex™HT thermoplastic elastomer polymer is based on hydrogenated styrene block copolymer. This series of polymers specializes in providing good compression permanent deformation resistance and high heat resistance at high temperatures. In addition, OnFlex™S HT polymer conforms to EN 681-2 standard, providing excellent mechanical properties, wide hardness range and good processability.

General Information	
Features	Low compressive deformability Ozone resistance Heat resistance, high
Uses	Pipe seal
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Extrusion Injection molding

Physical	Nominal Value	Unit	Test Method
Density	1.00	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shao A, 3 seconds, 23°C, 6.00mm, injection molding)	50		DIN 53505
IRHD Hardness	60		ISO 48
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ISO 37
Transverse flow: 100% strain	1.10	MPa	ISO 37
Flow: 100% strain	1.70	MPa	ISO 37
Transverse flow: 300% strain	1.90	MPa	ISO 37
Flow: 300% strain	2.90	MPa	ISO 37
Tensile Stress ¹			DIN 53504
Lateral flow: fracture, 23°C, 2.00mm	9.40	MPa	DIN 53504
Traffic: fracture, 23°C, 2.00mm	5.20	MPa	DIN 53504
Tensile Elongation ²			DIN 53504
Lateral flow: fracture, 23°C, 2.00mm	800	%	DIN 53504
Traffic: fracture, 23°C, 2.00mm	560	%	DIN 53504
Tear Strength	27	kN/m	ISO 34-1
Compression Set			ISO 815
-10°C, 22 hr	36	%	ISO 815
-10°C, 72 hr	50	%	ISO 815

23°C, 72 hr	20	%	ISO 815
70°C, 22 hr	27	%	ISO 815
100°C, 22 hr	42	%	ISO 815
125°C, 22 hr	46	%	ISO 815
150°C, 22 hr	69	%	ISO 815
Stress relaxation			ISO 3384
23°C ³	13	%	ISO 3384
23°C ⁴	24	%	ISO 3384
General Material Type	Styrene thermoplastic elastomers (TES)		

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (70°C, 168 hr, 2.00 mm)	-3.0	%	DIN 53504
Change in Tensile Strain at Break in Air (70°C, 168 hr, 2.00 mm)	3.0	%	DIN 53504
Change in Shore Hardness in Air (Support A, 70°C, 168 hr)	3.0		DIN 53505
Change in Volume			ISO 1817
70°C, 72 hr, in ASTM #1 oil	16	%	ISO 1817
70°C, 168 hr, in water	-0.60	%	ISO 1817

Additional Information	Nominal Value
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各项属性值是采用注射模制基板测量得出.

Injection	Nominal Value	Unit
Processing (Melt) Temp	180 - 220	°C
Mold Temperature	30.0 - 60.0	°C
Injection Rate	Fast	

NOTE	
1.	200 mm/min
2.	200 mm/min
3.	168 hours, 25% intensity of compression, method A
4.	100 days, 25% intensity of compression, method A

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