ENFLEX® EA5790A

Tuesday, November 5, 2019

ENPLAST Americas, a Ravago Group Company - Thermoplastic Elastomer

General Information

Product Description

90 Shore A TPE, available in black and natural offering high heat performance with excellent oil and fluid resistance. This grade also exhibits high strength, good flexibility and resiliency. Intended for injection molding and extrusion processing. Designed for under the hood applications such as gaskets, grommets, seals, plugs where high heat and oil resistance is required.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Alcohol Resistant • Detergent Resistant • Good Adhesion • Good Colorability • Good Flexibility • Good Processability	• High Elasticity • High Heat Resistance • High Strength • Low Compression Set • Oil Resistant • Ozone Resistant	• Recyclable Material • Resilient • Soft • Solvent Resistant • UV Resistant
Uses	• Automotive Applications • Automotive Under the Hood	• Gaskets • Grommets	• Plugs • Seals
Appearance	• Black	• Natural Color	
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.17		ASTM D792
Melt Mass-Flow Rate (230°C/2.16 kg)	2.5	g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus - 1% Tangent	13.2	psi	ASTM D412
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break)	1600	psi	ASTM D412
Tensile Elongation (Break)	480	%	ASTM D412
Tear Strength	325	lbf/in	ASTM D624
Compression Set			ASTM D395B
73°F, 22 hr	33	%	
212°F, 22 hr	65	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 10 sec, Injection Molded	90		
Shore D, 10 sec, Injection Molded	35		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-30.0	°F	ASTM D746
Dynamic Service Temperature	338	°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	175 to 212	°F
Rear Temperature	390 to 430	°F
Middle Temperature	430 to 465	°F

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Injection	Nominal Value	Unit
Front Temperature	430 to 465	°F
Nozzle Temperature	430 to 465	°F
Processing (Melt) Temp	430 to 445	°F
Mold Temperature	50 to 120	°F
Injection Pressure	750 to 1300	psi
Injection Rate	Fast	
Screw Speed	50 to 200	rpm
Clamp Tonnage	2.0 to 3.5	tons/in²
Cushion	0.200 to 0.500	in

Injection Notes

Holding Time: 5 to 7 Sec.

Extrusion	Nominal Value	Unit
Drying Temperature	175 to 212	°F
Hopper Temperature	355 to 430	°F
Cylinder Zone 1 Temp.	410 to 445	°F
Cylinder Zone 3 Temp.	410 to 445	°F
Cylinder Zone 5 Temp.	410 to 445	°F
Adapter Temperature	410 to 445	°F
Melt Temperature	410 to 445	°F
Die Temperature	410 to 445	°F
Screw L/D Ratio	24.0:1.0	

Extrusion Notes

Screw: L/D 20:1 or greater (L/D 24:1 preferred)
Cooling Water: 60 - 85°F (15-30°C)
Screw Speed: 100 - 200 rpm
Screen Pack: 20/40/60

Notes

[1] Typical properties: these are not to be construed as specifications.