



ENFLEX® EA3745A

ENPLAST Americas, a Ravago Group Company - Thermoplastic Elastomer

Tuesday, November 5, 2019

General Information

Product Description

45 Shore A TPE (Styrenic Block Copolymer based) available in black and natural for injection molding and extrusion applications. This grade offers soft/tactile feel and adhesion (overmolding or co-extrusion) to ABS, PC and HIPS/PS.

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Acid Resistant • Alcohol Resistant • Base Resistant • Detergent Resistant • Good Adhesion	• Good Colorability • Good Processability • High Elasticity • Oil Resistant • Ozone Resistant	• Recyclable Material • Soft • Solvent Resistant • UV Resistant
Appearance	• Black	• Natural Color	
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.990		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	5.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	215	psi	ASTM D412
Tensile Strength (Break)	698	psi	ASTM D412
Tensile Elongation (Break)	570	%	ASTM D412
Tear Strength	150	lbf/in	ASTM D624
Compression Set			ASTM D395B
73°F, 22 hr	20	%	
158°F, 22 hr	69	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 10 sec, Extruded	42		
Shore A, 10 sec, Injection Molded	45		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-67.0	°F	ASTM D746
Dynamic Service Temperature	194	°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	130 to 160	°F
Rear Temperature	300 to 340	°F
Middle Temperature	340 to 375	°F
Front Temperature	390 to 430	°F
Nozzle Temperature	390 to 430	°F
Processing (Melt) Temp	375 to 410	°F
Mold Temperature	50 to 120	°F
Injection Pressure	750 to 1300	psi

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Injection	Nominal Value	Unit
Injection Rate	Fast	
Screw Speed	50 to 200	rpm
Clamp Tonnage	2.5 to 3.5	tons/in ²
Cushion	0.200 to 0.500	in

Injection Notes

Holding Time: 5 to 7 Sec.

Extrusion	Nominal Value	Unit
Drying Temperature	130 to 160	°F
Hopper Temperature	300 to 340	°F
Cylinder Zone 1 Temp.	340 to 375	°F
Cylinder Zone 3 Temp.	340 to 375	°F
Cylinder Zone 5 Temp.	355 to 390	°F
Adapter Temperature	355 to 410	°F
Melt Temperature	375 to 430	°F
Die Temperature	355 to 410	°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.