ENFLEX® V1070A

Wednesday, November 6, 2019

ENPLAST Americas, a Ravago Group Company - Thermoplastic Vulcanizate

General Information

Product Description

Enflex V1070A TPV (thermoplastic vulcanizate) is a general purpose EPDM/PP compound available in both natural and black. It is designed to replace thermoset elastomers such as EPDM or polychloroprene, and traditional thermoplastic TPVs. Enflex V grades provide the performance of vulcanized rubber with the advantage of low-cost thermoplastic processing.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Acid Resistant • Alcohol Resistant • Base Resistant • Detergent Resistant • General Purpose	• Good Processability • High Heat Resistance • Low Compression Set • Oil Resistant • Ozone Resistant	• Recyclable Material • 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	0.972		ASTM D792
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (100% Strain)	479	psi	ASTM D412
Tensile Strength (Break)	1180	psi	ASTM D412
Tensile Elongation (Break)	610	%	ASTM D412
Tear Strength [2]	217	lbf/in	ASTM D624
Compression Set			ASTM D395
158°F, 22 hr	32	%	
257°F, 70 hr	49	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 5 sec, Extruded	69		
Shore A, 5 sec, Injection Molded	71		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-76.0	°F	ASTM D746
Melting Temperature	317	°F	ASTM D1238
Dynamic Service Temperature	266	°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.080	%
Rear Temperature	350 to 370	°F
Middle Temperature	360 to 380	°F
Front Temperature	370 to 390	°F
Nozzle Temperature	390 to 430	°F

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Injection	Nominal Value	Unit
Processing (Melt) Temp	390 to 450	°F
Mold Temperature	50 to 120	°F
Injection Pressure	750 to 1300	psi
Injection Rate	Fast	
Screw Speed	50 to 200	rpm
Clamp Tonnage	3.0 to 5.0	tons/in²
Cushion	0.200 to 0.500	in

Injection Notes

Holding Time: 5 to 7 Sec.
Cooling Time: 30 to 50 Sec.

Extrusion	Nominal Value	Unit
Hopper Temperature	320 to 350	°F
Cylinder Zone 1 Temp.	340 to 375	°F
Cylinder Zone 2 Temp.	340 to 375	°F
Cylinder Zone 3 Temp.	340 to 375	°F
Cylinder Zone 4 Temp.	340 to 375	°F
Cylinder Zone 5 Temp.	340 to 375	°F
Adapter Temperature	375 to 410	°F
Melt Temperature	375 to 390	°F
Die Temperature	375 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)
Compression Zone: 355 - 390°F (180 - 200°C)
Metering Zone: 375 to 410°F (190 to 210°C)
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.

[2] Die C