



ENFLEX® V1070A BLK UV

ENPLAST Americas, a Ravago Group Company - Thermoplastic Vulcanizate

Wednesday, November 6, 2019

General Information

Product Description

Enflex V1070A BLK UV TPV (thermoplastic vulcanizate) is a fully weatherable black EPDM/PP compound. 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	<ul style="list-style-type: none"> Commercial: Active 		
Availability	<ul style="list-style-type: none"> North America 		
Features	<ul style="list-style-type: none"> Acid Resistant Alcohol Resistant Base Resistant Detergent Resistant Good Processability 	<ul style="list-style-type: none"> Good Weather Resistance High Heat Resistance Low Compression Set Oil Resistant Ozone Resistant 	<ul style="list-style-type: none"> Recyclable Material Solvent Resistant UV Resistant
Appearance	<ul style="list-style-type: none"> Black 		
Processing Method	<ul style="list-style-type: none"> 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	67		
Shore A, 5 sec, Injection Molded	70		
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/in ²
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