

EZPrene 9045D

Thermoplastic Vulcanizate

ENPLAST Americas, a Ravago Group Company

Message:

45 Shore D TPE (Thermoplastic Vulcanizate). Available in black, natural or pre-colored for injection molding and extrusion applications. This rigid material is non-hygroscopic and offers excellent chemical resistance and physical properties. EZPrene is polyolefin based and is 100% recyclable.

General Information			
Features	Rigidity, high		
	Lower die-out expansion		
	Good UV resistance		
	Recyclable materials		
	Good coloring		
	Good adhesion		
	Ozone resistance		
	Good chemical resistance		
	Low or no water absorption		
Appearance	Black		
	Available colors		
	Natural color		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.960	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw D, 5 seconds, extruded	44		ASTM D2240
Shore D, 5 seconds, injection molding	45		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	11.2	MPa	ASTM D412
Tensile Strength (Break)	18.6	MPa	ASTM D412
Tensile Elongation (Break)	700	%	ASTM D412
Tear Strength	89.0	kN/m	ASTM D624
Compression Set			ASTM D395
23°C, 22 hr	58	%	ASTM D395
125°C, 70 hr	75	%	ASTM D395
Thermal	Nominal Value	Unit	Test Method

Brittleness Temperature	-35.0	°C	ASTM D746
Dynamic Service Temperature	130	°C	
Ozone Resistance	Excellent		ASTM D1149

Injection	Nominal Value	Unit
Drying Temperature	82.2	°C
Drying Time	2.0 - 3.0	hr
Rear Temperature	191 - 204	°C
Middle Temperature	196 - 210	°C
Front Temperature	196 - 210	°C
Nozzle Temperature	210 - 221	°C
Processing (Melt) Temp	199 - 221	°C
Mold Temperature	23.9 - 51.7	°C
Injection Pressure	5.17 - 8.96	MPa
Injection Rate	Fast	
Screw Speed	50 - 200	rpm
Clamp Tonnage	2.8 - 4.8	kN/cm ²
Cushion	5.08 - 12.7	mm

Injection instructions

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

Extrusion	Nominal Value	Unit
Hopper Temperature	166 - 177	°C
Cylinder Zone 1 Temp.	171 - 191	°C
Cylinder Zone 2 Temp.	171 - 191	°C
Cylinder Zone 3 Temp.	171 - 191	°C
Cylinder Zone 4 Temp.	171 - 191	°C
Cylinder Zone 5 Temp.	171 - 191	°C
Adapter Temperature	191 - 210	°C
Melt Temperature	191 - 199	°C
Die Temperature	191 - 210	°C

Extrusion instructions

Screw: L/D 24:1 minimumCompression Zone: 355 - 390°F (180 - 200°C)Metering Zone: 375 to 410°F (190 to 210°C)Screw Speed: 30 - 80 rpmScreen Pack: 20/40/60

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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