

Santoprene™ 121-80

Thermoplastic Vulcanizate

ExxonMobil Chemical

Message:

It is a soft, black, UV-resistant thermoplastic vulcanized elastomer (TPV) in the thermoplastic elastomer (TPE) series. This material has good physical properties and chemical resistance at the same time, and is suitable for a wide range of fields. This brand of Shanduping TPV is a shear rate dependent product that can be processed on conventional thermoplastic injection molding, extrusion molding, blow molding, thermoforming or vacuum forming equipment. This is a polyolefin-based material that can be recycled in the production process.

General Information	
UL YellowCard	E80017-250497
Features	Good dimensional stability
	Good UV resistance
	Recyclable materials
	Ozone resistance
	Good chemical resistance
	Fatigue resistance
	Good weather resistance
Uses	Application in Automobile Field
	Outdoor application
Agency Ratings	UL QMFZ2
	UL QMFZ8
RoHS Compliance	RoHS compliance
UL File Number	E80017
Appearance	Black
Forms	Particle
Processing Method	Blow molding
	Multiple injection molding
	Co-extrusion molding
	Extrusion
	Extrusion blow molding
	Sheet extrusion molding
	Thermoforming
	Profile extrusion molding
	Vacuum forming
	Injection blowing molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.968	g/cm ³	ASTM D792
--	0.970	g/cm ³	ISO 1183
Outdoor Suitability	f1		UL 746C
Detergent Resistance	f4		UL 2157
Detergent Resistance	f3		UL 749
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shaw A, 15 seconds, 23°C, 2.00mm)	85		ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress - Across Flow (100% Strain, 23°C)	4.60	MPa	ASTM D412, ISO 37
Tensile Strength - Across Flow (Break, 23°C)	11.0	MPa	ASTM D412, ISO 37
Tensile Elongation - Across Flow (Break, 23°C)	560	%	ASTM D412, ISO 37
Tear Strength - Across Flow			
23°C ¹	35.0	kN/m	ASTM D624
23°C ²	35	kN/m	ISO 34-1
Compression Set			
23°C, 22 hr ³	25	%	ASTM D395B
125°C, 70 hr ⁴	52	%	ASTM D395B
23°C, 22 hr ⁵	25	%	ISO 815
125°C, 70 hr ⁶	52	%	ISO 815
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (135°C, 1008 hr)	-3.0	%	ASTM D573, ISO 188
Change in Ultimate Elongation in Air (135°C, 1008 hr)	-10	%	ASTM D573, ISO 188
Change in Durometer Hardness in Air (support a, 135 c, 1008 hr)	7.0		ASTM D573, ISO 188
Change in Tensile Strength (125°C, 70 hr, in IRM 903 Oil)	-33	%	ASTM D471, ISO 1817
Change in Ultimate Elongation (125°C, 70 hr, in IRM 903 Oil)	-48	%	ASTM D471, ISO 1817
Change in Volume			
125°C, 70 hr, in IRM 903 oil	67	%	ASTM D471
125°C, 70 hr, in IRM 903 oil	67	%	ISO 1817
Continuous Upper Temperature Resistance (1008 hr)	135	°C	SAE J2236
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-59.0	°C	ASTM D746, ISO 812
RTI Elec	90.0	°C	UL 746
RTI			UL 746

1.00 mm	90.0	°C	UL 746
1.50 mm	90.0	°C	UL 746
3.00 mm	95.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (23°C, 2.00 mm)	28	kV/mm	ASTM D149
Dielectric Constant (23°C, 1.96 mm)	2.60		ASTM D150, IEC 60250
Comparative Tracking Index (CTI)	PLC 0		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Resistance to Ignition (HVAR)	PLC 6		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1		UL 746
Hot-wire Ignition (HWI)			UL 746
1.00 mm	PLC 4		UL 746
1.50 mm	PLC 3		UL 746
3.00 mm	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.00 mm	HB		UL 94
1.50 mm	HB		UL 94
3.00 mm	HB		UL 94
Additional Information			
如果适用,这是基于扇形浇口注塑成型的平板测试结果.拉伸强度,伸长率和拉伸应力沿垂直流动方向测定 - ISO 1 型,ASTM die C.25% 形变时的永久压缩变形.从埃克森美孚欧洲分支机构直接购买的所有产品都符合 REACH 法规. 对于埃克森美孚未进口至欧洲的产品,用户应自行评估其是否满足 REACH 法规.			
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Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	3.0	hr	
Suggested Max Moisture	0.080	%	
Suggested Max Regrind	20	%	
Rear Temperature	177	°C	
Middle Temperature	182	°C	
Front Temperature	188	°C	
Nozzle Temperature	193 - 232	°C	
Processing (Melt) Temp	199 - 232	°C	
Mold Temperature	10.0 - 51.7	°C	
Injection Rate	Fast		
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	100 - 200	rpm	
Clamp Tonnage	4.1 - 6.9	kN/cm ²	
Cushion	3.18 - 6.35	mm	
Screw L/D Ratio	16.0:1.0 to 20.0:1.0		

Screw Compression Ratio	2.0:1.0 to 2.5:1.0	
Vent Depth	0.025	mm
Injection instructions		
Santoprene TPV与乙缩醛和PVC不相容.更多关于加工和模具设计的信息,请查阅我们的《注射成型指南》.		
Extrusion	Nominal Value	Unit
Drying Temperature	82.2	°C
Drying Time	3.0	hr
Melt Temperature	202	°C
Die Temperature	204	°C
Back Pressure	5.00 - 20.0	MPa
Extrusion instructions		
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NOTE		
1.	C mould	
2.	Method B, right-angle specimen (cut)	
3.	Type 1	
4.	Type 1	
5.	Type a	
6.	Type a	

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