Rapid Die Cut

Santoprene TPV

A soft, black, versatile thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in a wide range of applications. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding or extrusion. It is polyolefin based and recyclable within the manufacturing stream.

TECHNICAL DATA SHEET | (EFFECTIVE 24FEB25)

Santoprene 101-55

PHYSICAL PROPERTY	TEST METHOD	UNIT	VALUE
Resin Identification	ISO 1043	-	TPV
Part Marking Code	ISO 11469		>TPV<
Moulding Shrinkage, parallel	ISO 294-4, 2577	%	3.7
Moulding Shrinkage, normal	ISO 294-4, 2577	%	0.9
Tensile stress at 100% elongation, perpendicular	ISO 37	psi	273
Tensile stress at break, perpendicular	ISO 527-1/-2 or ISO 37	psi	727
Elongation at break, perpendicular	ISO 527-1/-2 or ISO 37	%	420
Brittleness Temperature	ISO 974 / ASTM D746	°F	-76
Shore A Hardness, 15s	ISO 48-4 / ISO 868	-	60
Compression Set, 70°C, 24hr	ISO 815	%	23
Compression Set, 125°C, 70hr	ISO 815	%	35
Tear Strength, normal	ISO 34-1	kn/m	17.9
Change in Tensile Strength, 150°C, 168hr	ISO 188	%	-15
Change in Tensile Strength at break, 150°C, 168hr	ISO 188	%	13
Change in Shore A Hardness, 150°C, 168hr	ISO 188	-	-1
RTI, electrical, 1.5mm	UL 746B	°F	194
RTI, electrical, 3.0mm	UL 746B	°F	194
RTI, strength, 1.5mm	UL 746B	°F	194
RTI, strength, 3.0mm	UL 746B	°F	203

Rapid Die Cut

Santoprene 101-55

PHYSICAL PROPERTY	TEST METHOD	UNIT	VALUE
Continuous Upper Temperature Resistance, 1000hr	SAE J2236	°F	275
Detergent Resistance	UL 749	-	f3
Detergent Resistance	UL 2157	-	f4
Burning Behav, at 1.5mm nom. thickness	IEC 60695-11-10	-	HB Class
Thickness Tested	IEC 60695-11-10	in	0.0591
UL Recognition	UL 94	-	Yes
Buring Behav. at thickness h	IEC 60695-11-10	-	HB Class
Thickness Tested	IEC 60695-11-10	in	0.0394
UL Recognition	UL 94	-	94
FMVSS	ISO 3795 (FMVSS 302)	-	B
Burning Rate, Thickness 2mm	ISO 3795 (FMVSS 302)	in/min	1.05
Hot Wire Ignition, 1.5 mm	UL 746A	s	PLC 3
Hot Wire Ignition, 3mm	UL 746A	s	PLC 3
Relative Permittivity, 60Hz	IEC 62631-2-1	-	2.4
Comparative Tracking Index, 23°C	UL 746A	-	0 PLC
Arc Resistance Performance Level Category	UL 746B	-	PLC 6 class
High Amperage Arc Ignition Category, 1.5mm	UL 746A	-	PLC 0 class
Density	ISO 1183	lb/in^3	0.035
Drying Recommended		-	Yes
Drying Temperature		°F	176
Drying Time, Dehumidified Dryer		hr	≥3
Processing Moisture Content		%	≤0.08
Max Regrind Level		%	20

(586) 948-8820 | rapiddiecut.com | 33460 Lipke St, Clinton Twp, MI 48035-4219

Rapid Die Cut

Santoprene 101-55

PHYSICAL PROPERTY	TEST METHOD	UNIT	VALUE
Melt Temperature Optimum		°F	392
Melt Temperature		°F	365 - 428
Mold Temperature Optimum		°F	86
Mould Temperature		°F	50 - 122
Drying Temperature		°F	180
Drying Time, Dehumidified Dryer		hr	3
Melt Temperature Range		°F	385
Processing		-	Injection Moulding, Multi Injection Moulding, Extrusion, Sheet Extrusion, Coextrusion
Injection Molding		-	Holding pressure should be about 50 to 75% of the actual injection pressure. A high screw RPM (100 to 200) is recommended. Back pressure is not always needed, however, a back pressure of 0.3 to 0.7 MPa may be used to ensure a homogeneous melt and maintain a consistent shot size. A higher back pressure is normally employed when using masterbatches.
Processing Notes		-	Desiccant drying for 3 hours at 80°C (180°F) is recommended. Santoprene® TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F) and is incompatible with acetal and PVC. Santoprene® TPV has a relatively high melt viscosity at low shear rates. Viscosity decreases as the shear rate increases. Increasing temperature has little effect on TPV melt viscosity. Smaller gates and higher shear rates keep melt viscosity low and improve melt flow. Please also refer to the injection molding guide.