

SANTOPRENE® 251-80W232

A soft, colorable, flame retardant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material has good fluid resistance and contains non-ether brominated flame retardants. It does not contain metal deactivators. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion, blow molding, thermoforming or vacuum forming. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component; file #QMTT2.E86313, Polymeric Materials for Use in Wire, Cable and Flexible Lighting Products - Component.
- Recommended for applications requiring a flame retardant material - UL 94 Vertical Flame rated.
- Recommended for applications requiring excellent flex fatigue resistance.
- Recommended for applications requiring excellent ozone resistance.

Typical mechanical properties

Stress at 100% elongation	3.9 MPa	ISO 527-1/-2 or ISO 37
Stress at break	9 MPa	ISO 527-1/-2 or ISO 37
Elongation at break	550 %	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	86	ISO 48-4 / ISO 868
Compression set at 23°C	31 %	ISO 815
Compression set at 70°C, 24h	40 %	ISO 815

Thermal properties

RTI, electrical, 1.5mm	90 °C	UL 746B
RTI, strength, 1.5mm	85 °C	UL 746B
RTI, strength, 3mm	90 °C	UL 746B

Flammability

Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	3 mm	UL 94
UL recognition	yes	UL 94
Oxygen index	27 %	ISO 4589-1/-2
Hot Wire Ignition, 1.5mm	PLC 3 s	UL 746A

Electrical properties

Comparative tracking index	PLC 0 PLC	UL 746A
Arc Resistance Performance Level Category	PLC 6 class	UL 746B
Electric Strength, Short Time, 2mm	28 kV/mm	ASTM D 149
High Amperage Arc Ignition Category, 1.5 mm	PLC 0 class	UL 746A
High Voltage Arc Tracking Rate	PLC 2 mm/min	UL 746A

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Other properties

Density 1240 kg/m³ ISO 1183

Injection

Drying Temperature 82 °C
 Drying Time, Dehumidified Dryer 3 h
 Processing Moisture Content 0.08 %
 Max. regrind level 20 %
 Max. mould temperature 10 - 52 °C
 Vent depth 25 µm
 Back pressure 0.345 - 0.689 MPa
 Injection speed fast

Extrusion

Drying Temperature 82 °C
 Drying Time, Dehumidified Dryer 3 h

Processing Texts

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.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Stellantis - Chrysler	MS-AR-100 AFN	
VW Group	VW50123	LF3001 NAT, VW EA211_Flame Retar_SOP 04/23