Celanese
The chemistry inside innovation™

SANTOPRENE® 121-60E400

SANTOPRENE®

A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance, and is designed for thin wall or complex profile extrusion applications. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Excellent elasticity and compression set
- Recommended for applications requiring excellent flex fatigue resistance
- Excellent ozone resistance
- Designed for improved UV resistance
- Designed for extruding thin wall sections with excellent definition (down to 0.33 mm [0.013'] radius) and to maximize run length with minimal build-up of material on screen packs or narrow sections of dies

Product information

Resin Identification	TPV	ISO 1043
Part Marking Code	>TPV<	ISO 11469

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	2.4	MPa	ISO 37
Tensile stress at break, perpendicular	6.4	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	437	%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	64		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	20.5	%	ISO 815
Compression set, 100°C, 24h	22.5	%	ISO 815
Compression set, 125°C, 70h	30.3	%	ISO 815

Physical/Other properties

Density	980	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	≥3	h
Processing Moisture Content	≤0.08	%
Melt Temperature Optimum	200	°C
Min. melt temperature	185	°C
Max. melt temperature	220	°C
Mold Temperature Optimum	30	°C
Min. mould temperature	10	°C
Max. mould temperature	50	°C

Extrusion

Drying Temperature	82	°C
Drying Time, Dehumidified Dryer	3	h
Melt Temperature Range	177 - 204	°C

Celanese
The chemistry inside innovation™

SANTOPRENE® 121-60E400

SANTOPRENE®

Characteristics

Processing	Extrusion, Sheet Extrusion
Delivery form	Pellets
Special characteristics	U.V. stabilised or stable to weather

Additional information

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	**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.

Automotive

OEM	ADDITIONAL INFORMATION
Renault	FRM 18-27-208 /---, No Spec, Special Part Approval, See Your CE Account Manager.
VW Group	VW 50123

Revised: 2025-04-21 Source: Celanese Materials Database