



TPE 5170

Soft Colorable Flame Retardant Thermoplastic Vulcanizate (TPV) Compound for Applications Requiring Excellent Ozone Resistance and Resistance to Flex Fatigue

Description

TPE 5170 is a soft, colorable, flame retardant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material has good fluid resistance and is formulated to replace thermoset rubbers such as EPDM, polychloroprene and chlorosulphonated polyethylene. **TPE 5170** complies with "Restriction of Hazardous Substances" Directive, Citation 2002-95-EC, commonly known as RoHS. **TPE 5170** contains a halogen-based, flame retardant additive package designed to reduce normal flame spread characteristics. TPE 5170 is readily pigmented to a variety of colors using standard color concentrates designed for thermoplastic or crosslinkable polyolefins. **TPE 5170** is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. It is polyolefin based and completely recyclable.

Key Features

- UL listed. File #QMFZ2 E341948
- RoHS Compliant
- Natural Color
- Form Pellets

Processing Methods

Blow Molding, Injection Molding, Multi Injection Molding
Extrusion, Coextrusion, Profile Extrusion, Sheet Extrusion

Desiccant drying for 3 hours at 80°C (180°F) is recommended. TPE 5170 has a wide temperature processing window from 175°C to 230°C (350 to 450°F). TPE 5170 is not compatible with acetal and PVC. For more information regarding processing, please contact T & T Marketing, Inc.'s Technical Service Hotline at 336-295- 3053 or email techservicehotline@ttmarketinginc.com.

Decomposition of this compound may occur if the melt is allowed to stagnate inside of the processing equipment at processing temperatures. Take caution to keep the flow of material moving, if even minimally, to avoid this condition.

Physical Properties	Typical Value ^{(2) (3)}	Unit	Test Method ⁽¹⁾
Specific Gravity	1.26	g / cm ³	ASTM D 792
Tensile Strength	595 (4.1)	psi (MPa)	ASTM D 412
Ultimate Elongation	430	%	ASTM D 412
Tensile Strength (100% Modulus)	290 (2.0)	psi (Mpa)	
Durometer Hardness, Shore A 15s	70	-	ISO 868

Flammability	Typical Value ⁽²⁾	Unit	Test Method ⁽¹⁾
Limiting Oxygen Index	24	%	ASTM D 2863
Flame Rating			
0.059 in (1.50 mm)	V-1		UL 94
0.0709 in (1.80 mm)	V-1, 5VA		UL 94
0.118 in (3.00 mm)	V-1, 5VA		UL 94

Thermal Properties	Typical Value ⁽²⁾	Unit	Test Method ⁽¹⁾
RTI Elec	194 (90.0)	°F (°C)	UL 746
RTI Str	194 (90.0)	°F (°C)	UL 746

Electrical Properties	Typical Value ⁽²⁾	Unit	Test Method ⁽¹⁾
Comparative Tracking Index (CTI)	PLC 1	-	UL 746
High Amp Arc Ignition (HAI)	PLC 0	-	UL 746
High Voltage Arc Resistance to Ignition (HVAR)	PLC 6	-	UL 746
Hot-wire Ignition (HWI)			
0.0591 in (1.50 mm)	PLC 2		UL 746
0.0709 in (1.80 mm)	PLC 2		UL 746
0.1180 in (3.00 mm)	PLC 1		UL 746
Inclined Plane Tracking (2.5 kV)	107	min	ASTM D2303

- (1) Tested in accordance with the latest issue of the designated Test Methods.
- (2) Data represents typical values and should not be used for specification work.
- (3) Tensile strength, elongation, and tensile stress are measured across the flow direction – ISO type 1, ASTM die C

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