T & T Marketing TPE 5595CR

Thermoplastic Elastomer

T & T Marketing, Inc.

Message:

TPE 5595CR is a natural, olefin-based thermoplastic elastomer (TPE) intended for wire and cable insulation and jacketing applications where high temperature performance and excellent flame resistance are required. TPE 5595CR complies with "Restriction of Hazardous Substances" Directive, Citation 2002-95-EC, commonly known as RoHS without exemption. TPE 5595CR does not contain decabromodiphenyl oxide. TPE 5595CR exhibits excellent wet and dry electrical properties and superior chemical resistance. It also provides good resistance to abrasion, impact and crush. TPE 5595CR also exhibits superior low temperature properties as demonstrated by it passing cold bend and impact testing at -50°C.
TPE 5595CR contains a halogen-based, flame retardant additive package designed to reduce normal PE flame spread characteristics and achieve a VW-1 flame resistant rating on 14 AWG wires and larger. It also offers good extrusion processing characteristics on either conventional polyethylene or PVC extrusion lines. In addition, TPE 5595CR contains a UV stabilization additive package that provides effective long-term UV weather resistance.
TPE 5595CR is readily pigmented to a variety of colors using standard wire and cable color concentrates designed for thermoplastic or crosslinked polyolefins.
Application
TPE 5595CR is intended for 125°C UL rated appliance wire and other flame retardant insulation or jacketing constructions. Specifically, this product is rated a V-0 by UL Standard 94 at a minimum thickness of 0.062 inches. TPE 5595CR is capable of achieving a VW-1 flame resistance on 14 AWG or larger conductors as per UL Standard 1581.

General Information	
Additive	UV stabilizer
	Flame retardancy
Features	Impact resistance, good
	Good UV resistance
	Good electrical performance
	Good wear resistance
	Halogenated
	Good chemical resistance
	Flame retardancy
Uses	Flame Retardant Insulation
	Cable sheath
	Wire and cable applications
	Wire sheath
	Insulating material
Agency Ratings	UL 62, Class 1.14
	UL 62, Class 1.18
	UL 62, Class 2.20
	UL 62, Class 2.28
	UL 62, Class 36
	UL 758, Style 1722

RoHS Compliance	RoHS compliance		
Appearance	Natural color		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.34	g/cm³	ASTM D792
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shaw A, 0.762mm	93		ASTM D2240
Shore D, 0.762mm	41		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus (0.762 mm)	359	MPa	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (0.762 mm)	20.0	MPa	ASTM D412
Tensile Elongation (Break, 0.762 mm)	600	%	ASTM D412
Aging	**Nominal Value**	**Unit**	**Test Method**
Tensile strength retention-7 days at 136°C (762.0 µm)	> 90	%	UL 1581
Elongation retention rate-7 days at 136°C (762.0 µm)	> 90	%	UL 1581
Extruder Screw L/D Ratio	24:1		
Extruder Screw Compression Ratio	2.7 to 3.5:1		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -45.6	°C	ASTM D746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (1.91 mm)	1.6E+16	ohms·cm	ASTM D257
Dielectric Strength (1.91 mm)	26	kV/mm	ASTM D149
Dielectric Constant (1.91 mm, 60 Hz)	2.40		ASTM D150
Dissipation Factor (1.91 mm, 60 Hz)	2.7E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	V-0		UL 94
Oxygen Index	28	%	ASTM D2863
Extrusion	**Nominal Value**	**Unit**	
Cylinder Zone 1 Temp.	188	°C	
Cylinder Zone 2 Temp.	199	°C	
Cylinder Zone 3 Temp.	204	°C	
Cylinder Zone 4 Temp.	210	°C	
Melt Temperature	210	°C	
Die Temperature	210 - 232	°C	

Extrusion instructions

Screw: Barrier or Single FlightDie: Smooth transition, With >= 1/8 in. land, Die & Tip include angle: 22-35°Throat: Water-cooled

Recommended distributors for this material

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