T & T Marketing TPE 5575R

Thermoplastic Elastomer

T & T Marketing, Inc.

Message:

TPE 5575R is a flexible 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 5575R complies with "Restriction of Hazardous Substances" Directive, Citation 2002-95-EC, commonly known as RoHS without exemption. TPE 5575R exhibits excellent wet and dry electrical properties and superior chemical resistance. It also provides good resistance to abrasion, impact and crush. TPE 5575R also exhibits superior low temperature properties as demonstrated by it passing cold bend and impact testing at -65°C.
TPE 5575R 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 5575R contains a UV stabilization additive package that provides effective long-term UV weather resistance.
TPE 5575R is readily pigmented to a variety of colors using standard wire and cable color concentrates designed for thermoplastic or crosslinked polyolefins.
Application
TPE 5575R 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 5575R is capable of achieving a VW-1 flame resistance on 12 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 flexibility
	Good wear resistance
	Halogenated
	Good chemical resistance
	Flame retardancy
Uses	Flame Retardant Insulation
	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	1.35	g/cm³	ASTM D792
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A, 0.762 mm)	77		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus (0.762 mm)	290	MPa	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (0.762 mm)	13.8	MPa	ASTM D412
Tensile Elongation (Break, 0.762 mm)	1100	%	ASTM D412
Aging	**Nominal Value**	**Unit**	**Test Method**
Tensile strength retention rate			UL 1581
7 days at 136°C : 762.0 µm	> 90	%	UL 1581
7 days at 158°C : 762.0 µm [1]	> 90	%	UL 1581
Elongation retention rate			UL 1581
7 days at 136°C : 762.0 µm	> 90	%	UL 1581
7 days at 158°C : 762.0 µm [2]	> 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	-65.0	°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	29	%	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			
NOTE			
1.	12 AWG Wire Samples		

2.	12 AWG Wire Samples

Recommended distributors for this material

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