Pexidan® X/T-UV2

Crosslinked Polyethylene

Saco Polymers

Message:

Low density moisture curable polyethylene for low voltage building wire applications (UL styles XHHW-2, RHW-2, RHH, SIS, USE-2 - UL 'Sunlight Resistant')
Pexidan® X/T-UV2 is a low density XLPE system curable by moisture and consists of a silane pre-grafted base compound A-3001 and a flame-retardant catalyst masterbatch CAT-047FR-UV2. Mixed and extruded in the proper proportions (80:20), the two components result in a material curable by exposure to 70-90°C hot water o r even ambient moisture. Pexidan® X/T-UV2 is a RoHS-compliant system. Insulation made with this system may be marked SUNRES in all colors and in all sizes per UL44.

General Information	
Additive	Flame retardancy
Features	Low density Good UV resistance Crosslinkable Flame retardancy
Uses	Low voltage insulation Wire and cable applications
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Wire & Cable Extrusion Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.02	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Degree of Crosslinking	67	%	ASTM D2765
Weatherometer Aging			UL 1581
Elongation after exposure [1]	370	%	UL 1581
Elongation after exposure [2]	400	%	UL 1581
Original elongation [3]	420	%	UL 1581
Original elongation [4]	430	%	UL 1581
Original tensile strength [5]	17.2	MPa	UL 1581
Original tensile strength [6]	16.8	MPa	UL 1581
Tensile strength after exposure [7]	17.1	MPa	UL 1581
Tensile Strength after exposure [8]	14.4	MPa	UL 1581
Deformation	1.0	%	UL 1581
Dielectric Breakdown			UL 1581

--	32000	V	UL 1581
after glancing impact	26000	V	UL 1581
Insulation Resistance			UL 1581
23°C	220000	Mohms/1000 ft	UL 1581
90°C	2000	Mohms/1000 ft	UL 1581
after 12 weeks : 90°C	2600	Mohms/1000 ft	UL 1581
Acid Gas Emission - HBr	3.7	%	CSA C22.2 No. 0.3 Method 2
Crushing Test	612350	g	UL 1581
Hot Elongation - elongation under load (150°C) [9]	40	%	Internal method
Head Temperature	185	°C	
Screw cooling	neutral		

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			UL 1581
Yield	12.4	MPa	UL 1581
Fracture [10]	13.6	MPa	UL 1581
Fracture [11]	12.6	MPa	UL 1581
Fracture	16.2	MPa	UL 1581
Fracture [12]	15.9	MPa	UL 1581
Tensile Elongation			
Fracture [13]	330	%	UL 1581
Fracture [14]	380	%	UL 1581
Fracture	430	%	UL 1581

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -75.0	°C	ASTM D746

Electrical	Nominal Value	Unit	Test Method
Dielectric Constant			
1 MHz	2.34		ASTM D150
100 MHz	2.34		ASTM D150
90°C, 60 Hz	2.50		UL 1581
Dissipation Factor			ASTM D150
1 MHz	1.2E-3		ASTM D150
100 MHz	8.0E-4		ASTM D150

Flammability	Nominal Value	Unit	Test Method
Oxygen Index (4.00 mm)	24	%	ASTM D2863

Additional Information	Nominal Value	Unit	Test Method

Curing can be done in the following ways:
by immersion in hot water at 70-90°C
by exposure to low pressure steam
ambient atmospheric moisture
In all cases curing time depends on wall thickness, temperature, relative humidity and quantity of wire on the reel.Typical values reported above are obtained from 14 AWG samples with 30-mil wall thickness, cured in hot water (6 hours @ 95°C). Weatherometer testing performed on stranded 6 AWG sample. Oxygen Index performed on a 4mm thick compression-molded sample.

Extrusion	Nominal Value	Unit

Cylinder Zone 1 Temp.	154 - 171	°C
Cylinder Zone 2 Temp.	154 - 171	°C
Cylinder Zone 3 Temp.	154 - 171	°C
Cylinder Zone 4 Temp.	154 - 171	°C
Die Temperature	185	°C

NOTE	
1.	720 hr. exposure - SUNRES
2.	300 hr. exposure
3.	720 hr. exposure - SUNRES
4.	300 hr. exposure
5.	300 hr. exposure
6.	720 hr. exposure - SUNRES
7.	300 hr. exposure
8.	720 hr. exposure - SUNRES
9.	15 minutes, 0.2 N/mm^2 load
10.	After 60 day oil @ 75°C
11.	After 30 day gasoline @ 23°C
12.	After thermal ageing (7days @121°C)
13.	After 60 day oil @ 75°C
14.	After 30 day gasoline @ 23°C

Recommended distributors for this material

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