Pexidan® U/T

Crosslinked Polyethylene

Saco Polymers

Message:

Low density moisture curable polyethylene compound for low voltage underground service entrance cables (UL styles USE and USE-2).
Pexidan® U/T is a low density XLPE system curable by moisture and consists of a silane pre-grafted base compound A-3001 and a catalyst masterbatch CAT-008. When mixed and extruded in the proper proportions (95/5), the two components result in a material curable by exposure to 70-90°C hot water or even ambient moisture. In order to prevent pre-scorching the grafted compound and the catalyst masterbatch must be stored separately and mixed only when used. Pexidan® U/T is RoHS-compliant.

General Information	
Features	Low density Crosslinkable
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	0.918	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Degree of Crosslinking	72	%	ASTM D2765
Weatherometer Aging [1]			UL 1581
Elongation after exposure	430	%	UL 1581
Original elongation	440	%	UL 1581
Original tensile strength	18.3	MPa	UL 1581
Tensile strength after exposure	19.8	MPa	UL 1581
Deformation	1.0	%	UL 1581
Dielectric Breakdown			UL 1581
--	35000	V	UL 1581
after glancing impact	33000	V	UL 1581
Insulation Resistance			UL 1581
23°C	560000	Mohms/1000 ft	UL 1581
90°C	21000	Mohms/1000 ft	UL 1581
after 12 weeks : 90°C	50000	Mohms/1000 ft	UL 1581
Crushing Test	635029	g	UL 1581

Hot Elongation - elongation under load (150°C) [2]	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 [3]	12.8	MPa	UL 1581
Fracture [4]	12.6	MPa	UL 1581
Fracture	15.2	MPa	UL 1581
Fracture [5]	13.4	MPa	UL 1581
Tensile Elongation			
Fracture [6]	330	%	UL 1581
Fracture [7]	350	%	UL 1581
Fracture	450	%	UL 1581

Electrical	Nominal Value	Unit	Test Method
Dielectric Constant			ASTM D150
1 MHz	2.28		ASTM D150
100 MHz	2.28		ASTM D150
Dissipation Factor			ASTM D150
1 MHz	4.4E-4		ASTM D150
100 MHz	4.6E-4		ASTM D150

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 (except MFR and Weather-o-meter) are obtained from 14 AWG samples with 30-mil wall thickness, cured in hot water (6 hours @ 95°C). Weather-o-meter testing was performed on 7 stranded, 6 AWG 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.	300 hr. exposure
2.	15 minutes, 0.2 N/mm^2 load
3.	After 60 day oil @ 75°C
4.	After 30 day gasoline @ 23°C
5.	After thermal ageing (7days @121°C)
6.	After 60 day oil @ 75°C
7.	After 30 day gasoline @ 23°C

Recommended distributors for this material

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