3220 Crocker Avenue, Sheboygan, WI 53081
Tel 920.803.0778 | Fax 920.803.0779
www.sacopolymers.comp

Customized Solutions for Diverse Applications

PEXIDAN™ R/T

Low density moisture curable polyethylene compound for low voltage building wire insulation (CSA RW-90, RWU-90, AC-90, TECK-90).

Description

PEXIDAN™ R/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-009. Mixed in the proper proportions (95/5) the two components result in a material that is curable by exposure to 70-95°C hot water or even ambient moisture. PEXIDAN™ R/T is listed with the Canadian Standards Association for use in RW-90 and RWU-90 XLPE applications and rated to -40ºC. PEXIDAN™ R/T is RoHS-compliant.

Physical and mechanical properties	Typical value	Unit	Test method
- Specific gravity at 23°C	0.92		ASTM D792
- MFR, 190°C/2,16 kg	0.8	g/10 min.	ASTM D1238
- Mechanical properties: tensile strength at break tensile strength at yield elongation at break	 2400 1800 340	 psi psi %	CSA C22.2 No. 38
- Mechanical Properties: after thermal ageing (7days @121°C): Tensile strength at break Elongation at break	 2300 310	 psi %	ASTM D638
- Low Temperature Brittleness Point (LTBP)	Below - 75	ºC	ASTM D746
- Deformation	5	%	CSA C22.2 No. 38
- Shrink back	0	mm	CSA C22.2 No. 38
- Insulation Resistance @15°C after 12 weeks @ 90°C	281000 74000	GΩ–meter	CSA C22.2 No. 38
- Relative Permittivity (SIC) @ 60 Hz	2.38		CSA C22.2 No. 38
- Dielectric Constant , 1MHz – 100MHz range - Dissipation Factor @ 1 MHz @ 100 MHz	2.28 0.00044 0.00046		ASTM D150
- Hot Elongation test, 15 minutes @ 150°C, 0.2 N/mm^2 load: elongation under load	 40	 %	SĀCO Polymers DWI-QA-4007 based on ICEA T-28-562
-Degree of Crosslinking	72	%	ASTM D2765

Typical values reported above (except MFR) are obtained from 14 AWG solid conductor samples with a 30-mil wall, cured in hot water (6 hours @ 95°C).

Processing

The pre-grafted base PEXIDAN™ A-3001 must be added with type CAT-009 catalyst masterbatch in the proportion 95:5 by weight. We suggest dosing the two components directly in the hopper of the extruder using a gravimetric or loss-in-weight feeder. In order to prevent scorching the grafted compound and the catalyst masterbatch must be stored separately and mixed just prior to consumption.

PEXIDAN™ R/T can be processed with PE single screw extruders having proper temperature control and a good mixing screw (2.5:1 ratio at least).

The following temperature profile is suggested:

barrel zones:	from 310 to 340 °F
head:	365 °F
die:	365 °F
screw:	neutral

These conditions may depend on the equipment being used. It is recommended using conveyors and tools shaped in order to prevent stagnation in the head. In case of prolonged shutdown, purge the extruder with LDPE.

Curing can be done in the following ways:
- by immersion in hot water at 70-95°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.

A wide range of commonly used color masterbatches based on LDPE are available. A use level of 1.5% by weight should give an acceptable color but this will be dependent upon the concentrate itself. Levels of concentrates should be kept to a minimum because they can detract from performance. It is recommended that the catalyst and color masterbatches be dried prior to usage 4-6 hours at 60°C (150°F) using a desiccant dryer.

Storage

Due to the moisture sensitivity of PEXIDAN™, SĀCO Polymers suggests that the following points should be considered when storing the materials:
- Ambient temperature generally not exceeding 30°C
- Avoid direct exposure to sunlight and weathering
- Once the package has been opened it is suggested that the entire contents be used.

Packaging

The physical form of both PEXIDAN™ A-3001 and CAT-009 are free flowing pellets, and are available in 1500-lb (680-kg) gaylords or 300-lb (136-kg) fibre drums.

Our Technical Service is at your disposal for further information and assistance.

sāco polymers

3220 Crocker Avenue, Sheboygan, WI 53081
Tel 920.803.0778 | Fax 920.803.0779
www.sacopolymers.com