

Silane Crosslinkable Polyethylene Compound (XLPE)

Product Description

Crosslinking improves the mechanical and thermal properties of the final product, making it suitable for various applications such as insulation for wires and cables, pipes, and industrial uses. SPLINK-L12 is a silane crosslinkable natural color polyethylene compound that can be processed in combination (95/5) with its catalyst masterbatch, SPCAT-C12, in standard extrusion machines and is suitable for both copper and aluminum conductors. The combination is an efficient solution for manufacturers looking forward to enhance the performance of their polyethylene products. Crosslinking occurs when the material is exposed to steam or hot water.

Applications

SPLINK-L12 / SPCAT-C12 is designed for insulation of low voltage energy cables with rated voltages up to 3 kV.

Specifications

SPLINK-L12 and SPCAT-C12 in combination meet the requirements of the below standards when processed using sound extrusion and testing procedure
IEC 60502-1

General Features

Good processability, Excellent surface finish, Excellent thermo-oxidative stability

Physical & Mechanical Properties	Standard & Test Method	Unit	Value
Density	IEC 60811-606	gr/cm ³	0.932
Melt Flow Index (MFI) (190 °C/2.16 kg)	IEC 60811-511	g/10 min	0.8
Melt Flow Index (MFI) (190 °C/5 kg)	IEC 60811-511	g/10 min	3.3
Hardness	ASTM D2240	Shore D	55
Tensile Strength	IEC 60811-501	MPa	22
Tensile Strain		%	350
Ageing (135°C, 7 days)			
Variation of Tensile Strength	IEC 60811-401	%	=< 25
Variation of Tensile Strain		%	=< 25
Hot Set (200°C, 0.20 MPa)			
Elongation under load	IEC 60811-507	%	< 80
Permanent Elongation After cooling		%	< 10

Note: The properties in the table are typical and should not be considered as standardized. MFI data is reported on base resin.

Crosslinking

These items can undergo crosslinking by being immersed in hot water or exposed to low-pressure steam at temperatures around 90°C. The duration of this process may vary depending on factors such as humidity, insulation thickness, reel size, and temperature

Processing Guidelines

SPLINK-L12 / SPCAT-C12 can be processed using most of the standard equipment for the extrusion of PVC/PE. The temperature profile may vary depending on the extruder and screw configurations, however, the following process conditions can be normally used

Barrel 1	140 - 150 °C
Barrel 2	150 - 160 °C
Barrel 3	160 - 170 °C
Barrel 4	170 - 180 °C
Clamp	180 - 190 °C
Head	190 - 200 °C
Die	200 - 210 °C
Screw	70 - 80 °C

No prior drying is recommended. The combination of the grafted compound and its catalyst masterbatch should not be idle in the heated extruder for more than 10 to 15 minutes as in this case scorch problems may occur. Melt temperature during process is recommended to be kept under 200 °C. The opened bags should be consumed quickly and should not be left unattended as moisture absorption may cause scorch problems during extrusion. In case any color masterbatch is used it must be free of any trace of moisture.

Storage

Original packages should be kept closed and stored in dry conditions, away from direct sunlight in the temperature range between 10 to 30 °C

Packaging

25 kg bags (1250 kg per pallet)