SPLINK-S10B / SPCAT-C10

Silane Crosslinkable Black 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-S10B is a silane crosslinkable black polyethylene compound that can be processed in combination (95/5) with its catalyst masterbatch, SPCAT-C10, in standard extrusion machines. 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 moisture.

Applications

SPLINK-S10B / SPCAT-C10 is designed for insulation of overhead distribution cables with rated voltages up to 3 kV.

Specifications

SPLINK-S10B and SPCAT-C10 in combination meet the requirements of the below standards when processed using sound extrusion and testing procedure
IEC 60502-1
HD 626 S1

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	0.945
Melt Flow Index (MFI) (190 ˚C/2.16 kg)	IEC 60811-511	g/10 min	0.9
Melt Flow Index (MFI) (190 ˚C/5 kg)	IEC 60811-511	g/10 min	3.5
Carbon black Content	ASTM D1603	%	2.4
Hardness	ASTM D2240	Shore D	58
Tensile Strength	IEC 60811-501	MPa	24
Tensile Strain		%	400
Ageing (150°C, 10 days)			
Variation of Tensile Strength	IEC 60811-401	%	=< 25
Variation of Tensile Strain		%	=< 25
Hot Set (200°C, 0.30 MPa)			
Elongation under load	IEC 60811-507	%	< 90
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-S10B / SPCAT-C10 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.

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)