Silane Grafted Xlpe Compound For Medium Volage Application KI - XL - 09 / XL - 10

DESCRIPTION

Grades KI-XL-09 / XL-10 combination is suitable for Medium Voltage Power Cables (MV) applications, upto 33KV KI-XL09 & XL10 meets requirements as applicable under following standards, when processed using sound extrusion practice and testing procedure;

- IS 10810
- BS 5467, 5468, 6724, 7655
- IEC 60502

Such system allows the compound to be extruded as a normal thermoplastic in a conventional PE (or even PVC) extrusion line, thus obviating the need of an expensive continuous vulcanizing (CV) extrusion line. The cross-linking step is subsequently carried out by immersion in hot water, or exposure to steam. In both cases, time of curing is to be optimized as a function of thickness of insulation, concentration of catalyst and temperature.

TYPICAL PROPERTIES

A) XL-09

Properties	Unit	Typical Value	Test Method
Density	gm / cm^3	0.923	ASTM – D-792
Melt Flow Index (190°C, 2.16 kg)	gms/10 min	0.5 – 1.0	IS-10810 (Part – 23) / ASTM – D-1238
Contamination	No./kg.	< 20	Visual (KIL)
Contamination	No. /kg.	6 – 20 max	On Extruded tape (KIL)

B) XL-09 / XL-10 COMBINATION

Mixed at 130°C at 95:5 ratio for 3 minutes. Compression-moulded to a sheet of 1.5 mm thickness. Cured by immersion in water at 95°C for 3 hours. Conditioning for 3 hours.

Properties	Unit	Typical Value	Test Method
Tensile Strength	MPa	14 – 17	IS-10810 Part – 7 / ASTM-D-638
Elongation at break	%	> 400 – 450	IS-10810 Part – 7 / ASTM-D-638
Hot set at 200 °C			
a) Hot Elongation after 15 min.	%	60 – 90	IS-10810 Part-30 / IEC 60811-1-2
b) Permanent Set after after 5 min	%	± 5	– do –
Oven ageing at 135 °C, 168 hours			
a) Variation in Tensile Strength	%	± 15	IS-10810 Part –11 / IEC 60811-2-1
b) Variation in Elongation at Break	%	± 15	IS-10810 Part –11 / IEC 60811-2-1

Silane Grafted Xlpe Compound For Medium Volage Application KI - XL - 09 / XL - 10

Properties	Unit	Typical Value	Test Method
Volume Resistivity @ 25°C	Ohm-cm	1×10^{16}	IS -1991 / IEC 60093
Dissipation factor @ 250V / 50 Hz, 25°C	–	0.0004	ASTM – D-150
Dielectric Constant @ 250V / 50Hz, 25°C	–	2.3 – 2.4	ASTM – D-150

PROCESSING GUIDELINES

It is recommended to dry the catalyst Masterbatch at 60°C in air oven in 4-6 cm layers for 8-12 hours. The Grafted Polymer should never be pre-heated.

The Grafted Polymer and Catalyst Masterbatch should be manually mixed at a ratio 95:5 at room temperature without shearing, just before consumption. Mixing in large quantities should be avoided, since such left over premix cannot be stored and used later.

It is important that extruder should not be kept idle for more that 10 minutes when filled with XL 09 / XL 10 premix.

PACKAGING

600 kgs. Paper Carton

20' FCL will take palletized 12 MT. & 40' FCL will take 24 MT.

STORAGE

The shelf life of the product exceeds 120 days from the date of production, subject to following conditions:

- Storage temperature not generally exceeding 25°C.
- Away from direct sunlight and weathering.
- Closed and unbroken bags.
- Use of compound within 3-4 hours after bags are open.