Kkalpana Industries (India) Limited

An ISO 9001:2015 company

TECHNICAL DATA

Silane Grafted Polyolefin Elastomeric Compound for low voltage power cables: KI-XL-01 & KI-XL-02

DESCRIPTION :

KI-XL-01 and KI-XL-02 is a Cross Linkable polyolefin elastomeric Compound where silane is incorporated through grafting. This product is suitable for Low Voltage Power Cables especially designed for crosslinking with ambient conditions.

The above product consists of 2 Components i.e. Grafted Polymer – Grade KI-XL-01 & Catalyst Master Batch Grade KI-XL-02 to be premixed prior to use at a ratio of 95:05.

SPECIFICATIONS :

KI-XL-01 & KI-XL-01 meets requirements as applicable under following standards, when processed using sound extrusion practice and testing procedure;

- IS-7098 Part 1/ IS 10810
- BS 5467, 5468, 6724, 7655
- IEC 60502

TYPICAL PROPERTIES :

A) XL-01

Property	Unit	Typical Value	Test Method
Density	gm / cm^3	0.910	ASTM-D-792
Melt Flow Index (190°C, 2.16 Kg)	gm / 10 Min	1.0 – 1.8	IS-10810 (Part-23) / ASTM-D-1238
Contamination (Visual)	No./Kg	< 5	KIIL

B) KI-XL-01 and KI-XL-02 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.

Property	Unit	Typical Value	Test Method
Tensile Strength	MPa	20	IS-10810 (Part-7) / ASTM-D-638
Elongation at break	%	450 – 550	IS-10810 (Part-7) / ASTM-D-638
Hot set at 250 °C Hot Elongation after 15 min. b) Permanent Set after 5 min	 % %	 50 – 90 ± 10	IS-10810 Part-30 / IEC 60811-507
Oven ageing at 150 °C, 168 hours Variation in Tensile Strength Variation in Elongation at Break	 % %	 ± 15 ± 15	IS-10810 Part-11 / IEC 60811-401
Hardness	Shore D	32-33	ASTM-D-2240
Volume Resistivity	Ohm-cm	1×10^{16}	ASTM D 257
Dissipation factor @ 250V / 50 Hz, 25°C	-	0.0004	ASTM-D-150
Dielectric Constant @ 250V / 50Hz, 25°C	-	2.2	ASTM-D-150

PROCESSING GUIDELINES :

It is recommended to dry the Catalyst Master batch and colour Master batch (if any) 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 Master batch 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 leftover premix cannot be stored.

It is important that extruder should not be kept idle for more that 10 minutes when filled with **KI-XL-01 and KI-XL-02** premix. It should be kept running at a low RPM if it is needed for changeover of size etc.

PACKAGING :

A. Moisture Barrier Multilayer Bags of 25 kg palletized and covered with PE liners
- 20’ FCL will take palletized 11 MT. & 40’ FCL will take 23.4 MT.

B. Octabin boxes with Aluminum Foil liners
- 40’ FCL will take 22 MT (550 Kg Boxes X 40 nos).

STORAGE :

The shelf life of the product is 90 days (In case of Export packaging the shelf life is guaranteed for 180 days instead of 90 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.
