



KLJ POLYMERS & CHEMICALS LIMITED

SIOPLAS XLPE COMPOUND

KLJ XL-33 KV

Description:

KLJ-XL-33KV is based on poly-ethylene chemically grafted with Silane. When it is mixed with catalyst master match (**KLJ-XL-MB-02 SC**). It accelerates the cross linking reaction in presence of moisture.

This material is suitable to be used for cable up to 33KV.

Specifications:

KLJ-XL-33 KV Compound meets the following specifications.

IS 7098 Part-II

IEC – 60502

IS 10810

Physical Properties:

Sr.No	Parameter	Unit	Test Method	Spécification	Typical Value
01	Tensile Strength (min.)	Mpa	IS 10810 Part-7	12.5	22
02	Elongation at break (min.)	%	IS 10810 Part-7	200	630
03	Variation in properties after ageing		@ 135±3 °C for 7 days		
a	Tensile Strength	%	IS 10810 Part-11	±25	+8.0
b	Elongation at break	%	IS 10810 Part-11	±25	-6.5
04	Hot Set @ 200°C/15 minute 20N/cm ² (max.)				
	A. Thickness :- 1.1 mm	%	IS 18010 Part-30	175	50
	B. Thickness :- 2.2 mm				80
	C. Thickness :- 4.0 mm				130
05	Permanent Set after cooling (max.)	%	IS 18010 Part-30	15	2.0
06	Volume Resistivity @ 27°C (min.)	Ohm-cm	IS 3396	1 x 10 ¹⁴	4 x 10 ¹⁶
07	Shrinkage @ 130±3°C/1 hour (max.)	%	IS 7098	4.0	1.3
08	Water absorption (gravimetric @ 85±2°C / 14 days (max.)	Mg/cm ²	IS 7098	1.0	0.25
09	Moisture Content (max.)	ppm	ASTM D-1045	-	400
10	Dielectric Constant (max)		IEC-60250	2.2	1.70
11	Dissipation Factor (max)		IEC-60250	0.004	0.0002
12	Dielectric Strength(min)	KV/mm	IEC-60243	22	30
13	Cold bend test @ -30°C	-	IS 10810 Part-20	No Crack	No Crack
14	Cold Impact test @ -30°C	-	IS 10810 Part-21	No Crack	No Crack
15	Cold Elongation test @ -30°C (min.)	%	IS 10810 Part-11	-	300

Processing Guidelines:

Grafted Polymer mixed with pre-heated Catalyst MB in the ratio 95:5 is to be extruded on PE or PVC extruder having L/D ratio of 22:1 to 26:1.

Typical process parameters are recommended as under:

Zone -1: 125 ± 10°C,
Zone-4 : 170 ± 10°C,

Zone-2 : 140 ± 10°C,
Zone-5 : 180 ± 10°C,

Zone- 3 : 155 ± 10°C,
X-Hea d & Die : 185 ± 10°C.

It is recommended to dry the catalyst MB @ 60° 80°C for about 1 hour, before mixing with grafted polymer.

Cross Linking:

The above extruded product can be cross linked by immersion in hot water or upon exposure to low pressure steam at a temperature of 90 °C.

Typical Cross linking data are as under.

	Thickness mm	Curing Hours	Hot Set %	Permanent Set (Max.) %
Tape Sample	3.8 - 4.2	6.0	130 - 140	9
		9.0	100 - 120	6
		15.0	70 - 100	4
		18.0	60 - 80	4
Cable Sample	3.8 - 4.2	15 - 20	80 - 120	4

Shelf Life/Storage:

KLJ-XL-33KV can be stored for 6 months date of manufacturing , without significant deterioration of the quality of material. However, it is recommended to be consumed as soon as possible.

KLJ-XL-33KV is recommended to be stored at in a cool, dry & clean environment in unopened original packaging.

Packaging:

KLJ-XL-33KV granules are packed in 25 kg bags, which are protected from moisture ingress.

Safety:

KLJ-XL-33KV & KLJ-MB-02 SC are not classified as dangerous preparation.

The products are supplied in the form of free-flowing granules of approx. 2-3 mm size and can be readily handled with commercially available equipment. Handling and transport of the products may generate some dust and fines, which constitute a potential hazard for dust explosion. All metal parts in the system should, therefore, be properly grounded. Properly designed equipment and good housekeeping will reduce the risk. Inhalation of any type of dust should be avoided as it may cause irritation of the respiratory system.

The product is intended for industrial use only. MSDS is available on request.

Disclaimer:

- The specifications given are the guidelines only.
- Above compound is suitable to run on different machines; however some adjustments may be required on individual machine.
- All properties are tested as per ASTM/IS/IEC standards.
- Any data may change without prior information.
- The customers are advised to check the quality, prior to commercial use. There is no guarantee and/or warrantee what so ever, after processing.