

An ISO 9001:2015 company  
**TECHNICAL DATA**

**Peroxide Based Tree Retardant XLPE Compound For  
Continuous Vulcanization Line : KI – XL – 8503 TR**

**DESCRIPTION :**

KI-XL-8503 TR is a long life, water-tree retardant, cross-linkable (peroxide based) polyethylene compound specially designed and developed for medium voltage power cables (up to 35 KV) insulation in service involving exposure to moisture. It contains extremely low level of contamination. Proper balance of anti-oxidant and peroxide ensures thermal stability during processing and post extrusion and results in optimum cure levels.

**SPECIFICATIONS :**

KI-XL-8503 TR compound meets requirements as applicable under following standards, when processed using sound extrusion practice and testing procedure;

- IEC 60502 / 60840
- HD 620-S1

**TYPICAL PROPERTIES :**

Property	Unit	Typical Value	Test Method
Density	gm / cm <sup>3</sup>	0.920	ASTM-D-792
Tensile Strength	MPa	15	ASTM D-638
Elongation at break	%	500	ASTM D-638
Hot elongation @200°C, 20N/cm <sup>2</sup>	%	70	IEC-60811-507
Permanent Set after 5 Min.	%	0	IEC-60811-507
Variation in Tensile Strength *	%	± 20	IEC-60811-401
Variation in elongation at break*	%	± 20	IEC-60811-401
Contamination	No./1000 g. granules	<200µ<500µ>500µ 10-2-0	By Optical Control Systems (KIIL)

\* After Heat Ageing at 150°C for 240 hrs.  
On moulded sheet at 180°C / 20 min.

**ELECTRICAL PROPERTIES :**

Property	Unit	Typical Value	Test Method
Di-Electric Constant @25°C	-	2.3	ASTM-D-150
Dissipation Factor @25°C	-	0.0005	ASTM-D-150
Di-electric Strength	KV/mm	22	ASTM-D-149
DC Volume Resistivity @ 25°C	Ohm-cm	1 X 10 <sup>16</sup>	ASTM-D-257

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**TREE RESISTANCE (RELATIVE TO STANDARD COMPOUND KI-XL-8503 TR) :**

<b>Property</b>	<b>Unit</b>	<b>Typical Value</b>	<b>Test Method</b>
Relative Water-Tree Size	%	25 - 50	ASTM-D-6097
Resistance to Water-Tree Growth @ 25°C 30 days	%	10	ASTM-D-6097

**PROCESSING GUIDELINES :**

During extrusion in a typical CCV line, following temperature profile is suggested.

<b>Position</b>	<b>Temperature (°C)</b>
Barrel	95 – 115
Head	115
Die	115
Screw	90

**PACKAGE** : 450 / 550 / 800/ 875 Kg in PE Liner and Corrugated Paper boxes.

**STORAGE** Shelf life of the product is 12 months from the date of production subject to following conditions:  
Storage shall take place indoors at temperature not generally exceeding 25°C. Box should be kept away from direct sunlight and weathering.

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*The information given in the document is believed to be reliable and is given in the good faith but without warranty. The user should test the product to ascertain the suitability for the intended use. Product specification or the whole document is subject to change without any prior notice.*

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