



Kkalpana Industries (India) Limited

An ISO 9001:2015 company
TECHNICAL DATA

Peroxide Based Super Clean XLPE Compound For Continuous Vulcanization Line: KI – XL – 8503S

DESCRIPTION :

KI-XL-8503S is a low density, cross-linkable (peroxide based) polyethylene compound developed specially for continuous Vulcanization process to produce medium and high voltage power cables (up to 66 KV). It contains extremely low level of contamination; proper balance of anti-oxidant and peroxide ensures thermal stability during and after extrusion and optimum cure levels.

SPECIFICATIONS :

KI-XL-8503S combination 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 ³ | 0.920 | ASTM-D-792 |
| Tensile Strength | MPa | >13 | ASTM D-638, |
| Elongation at break | % | > 300 | ASTM D-638, |
| Hot elongation @200°C, 20N/cm ² | % | < 60 | IEC-60811-507 |
| Permanent Set after 5 Min. | % | < 5 | IEC-60811-507 |
| Variation in Tensile Strength* | % | < 20 | IEC-60811-401 |
| Variation in elongation at break* | % | < 20 | IEC-60811-401 |
| Contamination | No./500 g. granules | <200µ<500µ>500µ 10-0-0 | By Optical Control Systems (KIIL) |

* After Heat Ageing at 135°C for 168 hrs.

* On moulded sheet of 1.5 mm 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 | - | 0.0004 | ASTM-D-150 |
| Di-electric Strength | KV/mm | > 25 | ASTM-D-149 |
| DC Volume Resistivity @ 25°C | Ohm-cm | 1 X 10 ¹⁶ | ASTM-D-257 |

MKT: TDS – 8503S – 11/17

PROCESSING GUIDELINES :

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

| Position | Temperature (°C) |
|-----------------|-------------------------|
| 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 deg.C. Box should be kept away from direct sunlight and weathering.

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.

MKT: TDS – 8503S – 11/17