



# SHAKUN POLYMERS LIMITED



## SPL-EPR-SiXL:85 FLEXIBLE ELASTOMERIC COMPOUND, CROSSLINKABLE BY EXPOSURE TO MOISTURE

### Description

**SPL-EPR-SiXL:85** is a FLEXIBLE ELASTOMERIC COMPOUND crosslinkable by exposure to moisture. **SPL -EPR-SiXL:85** consists of Polymer and One component Silane system. No other masterbatch except for the colour Masterbatch is required. It is specifically developed for increased heat resistant cable insulation where flexibility and high modulus is required.

**SPL-EPR-SiXL:85** meets the requirement of the following standards:

EN : 50363-1 :2005 EI 4, EI 6, EI 7

EN : 50363-2-1 :2005 EM 3, EM 4, EM 6

EN : 50363-2-2 :2005 EM 5

IEC 60092 IE 2

IS 6380 IE 2

### Properties

Properties	Test Method	Unit	Typical Value
<b>PHYSICAL &amp; MECHANICAL PROPERTIES</b>			
Density at 23°C	ASTM D 793	g/cm <sup>3</sup>	0.90
Hardness	ASTM D 2240	Shore A	85
Tensile Strength at Break	ASTM D 638	N/mm <sup>2</sup>	19
Elongation at Break	ASTM D 638	%	550
<b>Mechanical Properties after ageing in Air Oven, 168 hr at 135°C</b>			
Variation in Tensile Strength	ASTM D 638	%	3
Variation in Elongation at break	ASTM D 638	%	-8
<b>Mechanical properties after ageing in Air Oven, 240 hr at 150°C</b>			
Variation on Tensile Strength	ASTM D 638	%	7
Variation on Elongation at break	ASTM D 638	%	-10
<b>Hot Set test, 15 min. at 250°C, 0.2 N/mm<sup>2</sup></b>			
Elongation under load	IEC 60811-2-1	%	90
Elongation after unloading	IEC 60811-2-1	%	5
Hot pressure test at 150°C, k=1 (max. deformation)	IEC 60811-3-1	%	40

Bending test at -50°C

IEC 60811-1-4

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No Cracks

**ELECTRICAL PROPERTIES**

Volume resistivity at 20°C

IEC 60502

 $\Omega \times \text{cm}$  $10^{15}$ 

Volume resistivity at 90°C

IEC 60502

 $\Omega \times \text{cm}$  $10^{14}$ 

Insulation constant at 20°C

IEC 60502

M $\Omega \times \text{km}$ 

15000

Insulation constant at 90°C

IEC 60502

M $\Omega \times \text{km}$ 

1000

\*All Data on 1 mm Tape extruded at Temperatures between 150-200°C on Zones and 210-230°C on Crosshead and Die and then Cured in Water at temperature of 85°C

\* Data should not be used for specification work.

## ▣ Process Techniques

**SPL-EPR-SiXL:85** can be processed on conventional PE (or even PVC) Extrusion lines, thus obviating the need of an expensive continuous vulcanizing (CV) extrusion line. The cross linking step can be carried out by immersion in Hot Water (Sauna) at 60-65°C or exposure to low-pressure (0.15 bar) steam. In each case, curing time is to be optimized as a function of thickness of the insulation normally it is 6-8 hrs approx.

**NO DRYING OF COMPOUND IS REQUIRED.** Recommend Extrusion Temperatures in the range of 140 – 200°C on barrel and 210 – 230°C on Die and crosshead.

**SPL-EPR-SiXL:85** is a colourable material and PE-based masterbatches can be used after thorough drying.

## ▣ Packaging

**SPL-EPR-SiXL:85** is available in the form of free flowing pellets and supplied in bags of moisture resistant material with a net content of 25 Kgs. Material also available in Jumbo Boxes with a net content of 550 Kgs.

The shelf life of the product is 180 days from the date of manufacture subject to the following conditions:

- Storage temperature not generally exceeding 35°C
- Away from Direct Sunlight
- Closed and unbroken bags.
- Use of compound within 2 hours after bags are opened.

This information is to the best of our knowledge accurate but all recommendations or suggestions are made without guarantee since the conditions of use are beyond our control. The typical values given do not constitute specification for the product but represent typical analytical values.

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