



## SHAKUN POLYMERS PRIVATE LIMITED



## SPL-MD

## BLACK MEDIUM DENSITY POLYETHYLENE COMPOUND FOR JACKETING OF POWER AND COMMUNICATION CABLES.

**Description**

SPL-MD is a Black Medium Density Polyethylene Compound for jacketing of Power and Communication Cables. SPL-MD is characterized by extremely good ESCR and heat deformation properties. SPL – MD contains well-dispersed Carbon Black of fine particle size in order to ensure excellent weathering resistance.

**Specification**

SPL-MD meets the requirements of the following specifications:

- IS: 7098 (Part III) - 1993
- ASTM D 1248, TYPE II, CLASS C, CATEGORY 5, GRADE E8, E9, J4
- BS 6234: TYPE O3C, TS2
- IEC 60502, TYPE ST7
- IEC 60840, TYPE ST7

**Properties**

<i>Physical Properties</i>	<i>Test Method</i>	<i>Unit</i>	<i>Typical Value</i>
Melt Index	ASTM D 1238	g/10 min	0.30
Density at 27 °C	ASTM D 1505	g/cm <sup>3</sup>	0.943
Tensile Strength	ASTM D 638	MPa	22
Yield Strength	ASTM D 638	MPa	17
Elongation	ASTM D 638	%	700
Hot Deformation Test	IEC 60811-3-1	%	26
ESCR (10% IGEPAL) Fo	ASTM D 1693	h	>500
OIT at 200 °C	ASTM D 3895	min	> 60
Shore D Hardness	ASTM D 2240	--	58
Carbon Black Content	ASTM D 1603	%	2.5 ± 0.5
Carbon Black Dispersion	BS 2782	rating	3
<i>Electrical Properties</i>			
Dielectric Constant	ASTM D 150	-	2.45
Dissipation Factor	ASTM D 150	-	0.0005
Dielectric Strength	ASTM D 149	kV/mm	20
Volume Resistivity	ASTM D 257	ohm-cm	10 <sup>16</sup>

\* Data should not be used for specification work

**Application**

SPL-MD is well suited for Jacketing of Power Cables and can resist severe laying conditions even at elevated ambient temperatures. The ESCR and Petroleum Jelly resistance makes it suitable for jacketing of communication cable as well.

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## Processing Technique

SPL-MD provides excellent surface finish and high output rates over a broad range of conditions. For extrusion of SPL-MD, it is recommended to use a screw giving good homogenization without excessive shear. Standard PE-Screws have proven satisfactory but screws designed for PVC can also be used with good results by using screw cooling.

Maximum Pre-heating Temperature: 70 - 80° C

Melt Temperature: 210° C - 230° C

## Shipment

SPL-MD is available in the form of free flowing granules and supplied in raffia bags with a net content of 25 Kgs.

## Storage & shelf life

The product/compound should remain in

- Sealed condition
- Without exposing to direct sunlight and temperature not exceeding 45°C

Shelf life of the compound is 12 months from the date of manufacture.

Product alteration may occur due to extended period of storage.

Shakun accepts no liability of any kind in case the above mentioned storage conditions are not fulfilled.

## Safety

SPL-MD is not classified as a dangerous preparation.

The product is supplied in form of pellets of about 2 – 3 mm in size and can be readily handled with commercially available equipment. All handling and transport of the product may generate some dust and fines, which constitute a potential risk for dust explosion. Therefore, all instruments in the system should be properly grounded. Properly designed equipment and good storage will reduce the potential risk. Please, check and follow local disposal regulations!

Inhalation of any type of dust may irritate the air passages and should be avoided. For hot products: immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat.

In case of adverse exposure to melting products formed at elevated temperatures, immediately remove the affected victim from exposure.

Sweep up spilled granules and place in suitable containers for recycle or disposal. Consult an expert on disposal or recovered material and ensure conformity to local disposal regulations.

The product is intended for industrial use only. A Material Safety Datasheet is available on request. Please contact our Technical Team at SHAKUN POLYMERS PRIVATE LTD., for more details on various aspects of safety, recovery and disposal of the product.

This information is to the best of our knowledge accurate but all recommendations or suggestions are made without guarantee or legal liabilities 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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