



## SHAKUN POLYMERS PRIVATE LIMITED

SEMI-CONDUCTIVE SHIELDING COMPOUNDSP-PESC-44**Description**

SP-PESC-44 is a Semi-Conductive **Soft Compound** having excellent heat deformation resistant characteristics and specially designed for use as a thermoplastic conductor and insulation shield. Further the material has superior thermal stress crack resistance, toughness are the desired properties at the time of curing to avoid sticking of cable layers. It is also easy to process and has low volume resistivity.

**Specification**

SP-PESC-44 meets the requirement of:

- ICEA S-66-524/NEMA WC7
- BS 6622
- IEC 60502

**Application**

Semiconducting SP-PESC-44 has been designed to meet the conductivity and bondability requirements of both conductor and insulation shield for medium voltage cables.

Cables manufactured with SP-PESC-44 conductor and insulation shields are rated for 90 °C continuous service and 130 °C overload temperature.

**Properties**

<i>Properties</i>	<i>Test Method</i>	<i>Unit</i>	<i>Typical Value</i>
Melt Flow Index, 190 °C, 21.6 Kg.	ASTM D 1238	g/10 min.	26
Density at 27 °C	ASTM D 1505	g/cm <sup>3</sup>	1.10
Tensile Strength (25mm/min)	ASTM D 638	MPa	14
Elongation (25mm/min)	ASTM D 638	%	400
Variation in Tensile Properties After ageing 168 hrs. at 121 °C	ASTM D 638	%	<20
Shore D Hardness	ASTM D 2240	--	44
DC Volume Resistivity - at 23 °C - at 90 °C	ASTM D 257	ohm-cm ohm-cm	<50 <100

\*Tensile Properties on 1 mm Extruded Tape

\*Data should not be used for specification work

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**Processing**

Semiconductive SP-PESC-44 has been formulated to be easily extrudable using conventional polyethylene extrusion lines. For optimum extrusion result with SP-PESC-44 use melt extrusion temperature in the range of 130 - 170 °C. Specific processing condition can be determined only by trials on individual equipment.

Semiconducting SP-PESC-44 absorbs moisture, which can result in porosity in the extrudate. It is therefore recommended that the compound be thoroughly dried prior to use, usually 2-4 hours in hopper drier at 70 - 75 °C.

**Shipment**

SP-PESC-44 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 700 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**

SP-PESC-44 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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