



SHAKUN POLYMERS LIMITED



SPL-ZHFR-4500 ZERO-HALOGEN LOW SMOKE FLAME RETARDANT SHEATHING COMPOUND

Description

SPL-ZHFR-4500 is a Zero Halogen, Low Smoke, Flame Retardant Thermoplastic Compound, polyolefin based for Sheathing/Jacketing applications. SPL-ZHFR-4500 has high Oxygen Index, Temperature Index and thermal stress resistance.

Specifications

Cables manufactured with SPL-ZHFR-4500 according to standard technology meet the following industrial cable specifications :

- BS 7655 LTS 1,3 & 4
- IEC 332-1 / IEC 332-2 / IEC 332-3, CAT C
- VDE 0207 PART 24 HM2 & HM4

Features

SPL-ZHFR-4500 consists of special thermoplastic polymers, inorganic filler and other additives. It shows good processing and physical properties.

SPL-ZHFR-4500 provides following properties :

- Good abrasion resistance
- High Oxygen Index and Temperature Index
- Excellent mechanical properties
- Long-term reliability and Good UV Stability
- Excellent flame retardancy and low smoke

Properties

Properties	Test Method	Unit	Typical Value
Density at 27°C	ASTM D 792	g/cm ³	1.50
Melt Index at 21.6 kg & 160°C	ASTM D 1238	g/10min	5
Hardness	ASTM D 2240	Shore D	48
Tensile Strength at Break	ASTM D 638	MPa	12
Elongation at Break	ASTM D 638	%	210
Change of Tensile Properties after heat ageing (7 days at 100°C)	ASTM D 638	%	± 20

Limiting Oxygen Index	ASTM D 2863	% O ₂	42
Temperature Index	ASTM D 2863	°C	> 350
Smoke Density Rating	ASTM D 2843	%	<10
Halogen Acid Gas Generation	IEC 60754-1	%	< 0.5
Test on Gases Evolved During Combustion - pH - Conductivity	IEC 60754-2	pH µs/mm	5.5 8
Pressure Test at 90°C, 4 hrs	IEC 60811-3-1	%	25

- * Tensile Properties on 1 mm Extruded Tape
- * Data should not be used for specification work

Processing Techniques

We expect that SPL-ZHFR-4500 can be processed in a wide range of commercially available fabrication equipment.

In general, it is recommended that this product be processed using low C/R rather than regular polyethylene screw. The recommended extrusion temperature of SPL-ZHFR-4500 is in the range of 120 – 170°C. Specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Be cautious! Do not overheat more than 180°C. Predrying of compound in dehumidifying drier for 4 hours at 70°C is recommended to obtain a cable having smooth and glossy appearance.

Colorability

SPL-ZHFR-4500 is a Colorable Compound and we suggest to dry the colour master before use at 70 °C for 2 hrs.

Packaging

SPL-ZHFR-4500 is available in the form of free flowing pellets and supplied in bags of moisture resistant material with a net content of 30 Kgs. Material also available in Jumbo Boxes with a net content of 900 Kgs.

Safety

SPL-ZHFR-4500 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 of SHAKUN POLYMERS 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 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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