



SHAKUN POLYMERS LIMITED



SPL-ZHFR-3820

ZERO-HALOGEN LOW SMOKE FLAME RETARDANT COMPOUND

▣ Description

SPL-ZHFR-3820 is a Zero Halogen, Low Smoke, Flame Retardant Thermoplastic Compound, polyolefin based for sheathing / jacketing applications for cable diameters < 20 mm and also for inner sheath applications for big cross section cables. Further the compound is UV Stabilized.

▣ Specifications

Cables manufactured with SPL-ZHFR-3820 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-3820 consists of special thermoplastic polymers, inorganic filler and other additives. It shows good processing and physical properties.

SPL-ZHFR-3820 provides following properties :

- Good abrasion resistance
- Excellent mechanical properties
- Long-term reliability & UV stability
- Excellent flame retardancy and low smoke
- Good Water resistant as per LTS 1, LTS 3 & LTS 4

▣ Properties

Properties	Test Method	Unit	Typical Value
Density at 27°C	ASTM D 792	g/cm ³	1.45
Melt Index at 21.6 Kg & 160°C	ASTM D 1238	g/10min.	6
Hardness	ASTM D 2240	Shore D	47
Tear Strength	BS 6469	N/mm	> 7.0
Tensile Strength at Break	ASTM D 638	MPa	13
Elongation at Break	ASTM D 638	%	200

Variation of Tensile Properties after heat ageing (7 days at 100°C)	ASTM D 638	%	± 20
Variation in Tensile Properties after water immersion (7 days at 70°C) for LTS 1, LTS 3 & LTS 4	ASTM D 638	%	± 30
Retention of Tensile Properties after UV-Exposure for 600 Hours - Tensile Strength - Elongation	ASTM G 53	%	> 70 > 60
Limiting Oxygen Index	ASTM D 2863	% O ₂	38
Temperature Index	ASTM D 2863	°C	> 300
Smoke Density Rating	ASTM D 2843	%	< 10
Halogen Acid Gas Generation	IEC 60754-1	%	< 0.5
Toxicity Index	NES 713	-	< 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	%	40

* Tensile Properties on 1 mm Extruded Tape

* Data should not be used for specification work

Processing Techniques

We expect that SPL-ZHFR-3820 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 required extrusion temperature of SPL-ZHFR-3820 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 2 hours at 70°C is recommended to obtain a cable having smooth and glossy appearance.

Colorability

SPL-ZHFR-3820 is a Colorable Compound.

Packaging

SPL-ZHFR-3820 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-3820 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 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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