



# Kkalpana Industries (India) Limited

An ISO 9001:2015 company  
**TECHNICAL DATA**

## Polyolefin Copolymer Halogen free Cable Sheathing Compound: KI-LSHF-3402

### DESCRIPTION :

KI-LSHF-3402 is a thermoplastic, halogen free, fire retardant, low smoke compound designed for sheathing of low and medium voltage power cables and control & signaling cables.

### SPECIFICATION:

- VDE 0207 PART 24 HM 2 & HM 4
- BS 7655 LTS 1, 3 & 4
- IEC 60092 SHF 1
- IEC 332-1/IEC-332-2/IEC 332-3,CAT C

### TYPICAL PROPERTIES :

| Property                                     | Test Method   | Unit                 | Typical Value |
|--|---------------|----------------------|---------------|
| Density                                      | ASTM-D-792    | gm / cm <sup>3</sup> | 1.52          |
| Melt Flow Index, 150 <sup>0</sup> C-21.6 kgs | ASTM D-1238   | gm/ 10 min           | 4.5           |
| Hardness                                     | ASTM-D-2240   | Shore D              | 54            |
| Tensile Strength at break                    | ASTM D-638    | MPa                  | 12            |
| Elongation at break                          | ASTM D-638    | %                    | 200           |
| Variation in Tensile strength*               | IEC 60811-401 | %                    | ±20           |
| Variation in Elongation at break*            | IEC 60811-401 | %                    | ±20           |
| Limiting Oxygen Index                        | ASTM-D-2863   | %                    | 36            |
| Temperature Index                            | ASTM-D-2863   | °C                   | 310           |
| Smoke Density Rating                         | ASTM-D-2843   | %                    | 8             |
| Halogen acid gas emission                    | IEC 60754-1   | %                    | Nil           |
| Corrosivity of gases                         |               |                      |               |
| PH   | IEC 60754-2   | -                    | 6             |
| Conductivity                                 |               | µS/cm                | 16            |
| Toxicity Index                               | NES 713       | -                    | 2.5           |
| Pressure test at 90 <sup>0</sup> C,4hrs      | IEC 60811-3-1 | %                    | 20            |

\* After Heat ageing at 100°C for 168 hours.

\* Data is for information purpose only and should not be used for specification work.

MKT: TDS – LSHF/3402 – 11/17

**PRE DRYING:** Dehumidified hopper drying at 60-70°C for 2 – 3 hours prior to extrusion may be used to remove moisture.

**RECOMMENDED PROCESSING CONDITIONS:**

KI-LSHF-3402 can be processed using an 18-25 L/D extruder with proper control of the barrel temperature. A low compression screw (halogen free type) is recommended. PVC / PE screw are normally not suitable.

| Name of the Zone       | Zone 1  | Zone 2  | Zone 3  | Zone 4  | Zone 5  | Zone 6  | Zone 7  |
|------------------------|---------|---------|---------|---------|---------|---------|---------|
| Temperature Range (°C) | 130-140 | 140-145 | 140-145 | 140-145 | 145-150 | 150-160 | 160-165 |

These conditions are for guideline only and may vary depending on the extruder and crosshead type and size and tools design.

The use of breaker plate is advisable, in particular low compression screws. A wide range of PE based colour master batches are applicable; it is suggested an addition of 1 -2 % (approx.) by weight.

**STORAGE :**

The compound must be stored in the following conditions.

- Closed and unopened bags.
- Ambient temperature generally not exceeding 30°C
- Avoid direct exposure to sunlight and weathering.

The compound can be negatively affected by long storage time. KIIL suggest its use within 6 months from the date of manufacturing.

**PACKAGE :**

25 kg packed in woven sack bags containing inner liner.

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*The information given in the document is believed to be reliable and is given in the good faith but without warranty. The user should test the product to ascertain the suitability for the intended use. Product specification or the whole document is subject to change without any prior notice.*