



**TECHNICAL DATA SHEET**

**KI-38 (S)FRLS , TYPE-ST2**

**DESCRIPTION :** KI-38(S)FRLS IS FLAME RETARDENT PVC COMPOUND MEET IS-5831-1984 (TYPE-ST2) FOR WIRE & CABLE APPLICATION. KI-38(S) is heat –resisting sheath intended for use in cables operating at a maximum Rated conductor temperature 90°C.

**SPECIAL CHARACTERISTICS :**

- Excellent surface smoothness .
- Better mechanical properties and dimensional stability
- Long run Extrusion without Thermal degradation
- Excellent physical and thermal property.
- Balances of properties and processability.

**SPECIFICATION :**

1. This compound will meet type-ST2 of IS-5831
2. KI-38(S) FRLS Compound will meet the special properties like:

- i) Limiting Oxygen Index (ASTM D 2863)
- ii) Temperature Index (ASTM D 2863)
- iii) Acid gas generation (IEC -754-1)
- iv) FIRE RESISTANCE TEST AS PER:
  - a) IEC-332-3,CATEGORY A,B & C
  - b) IEEE-383
  - c) SS 424 14 75 (Swedish chimney Test)

Properties	Unit	Requirement IS	Typical
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		<b>5831 Specification</b>	<b>value*</b>
<b>Specific gravity</b>	-	<b>NOT APPLICABLE</b>	<b>1.52 ± 0.02</b>
<b>Shore hardness</b>	“A”	<b>NOT APPLICABLE</b>	<b>91 ± 2</b>
<b>Before Ageing</b>			
<b>Tensile strength</b>	<b>N/mm2</b>	<b>12.5 (min)</b>	<b>16.5</b>
<b>Elongation at break</b>	<b>%</b>	<b>150 (min)</b>	<b>250</b>
<b>After ageing @ 80°C ± 2°C for 7 days</b>			
<b>Variation in Tensile strength</b>	<b>%</b>	<b>± 25(max)</b>	<b>± 10</b>
<b>Variation in Elongation</b>	<b>%</b>	<b>± 25(max)</b>	<b>± 10</b>
<b>Thermal Stability @ 200°C ± 0. 5°C</b>	<b>Minutes</b>	<b>80 (min)</b>	<b>175</b>
<b>Loss Of Mass In Air Oven @ 80°C ± 2°C for 7 days</b>			
<b>Loss Of Mass</b>	<b>Mg/cm2</b>	<b>2 (max)</b>	<b>0.3</b>
<b>FRLS TEST</b>			
<b>Oxygen index</b>	<b>%</b>	<b>29 (min)</b>	<b>32</b>
<b>Temperature index</b>	<b>° C</b>	<b>250 (min)</b>	<b>300</b>
<b>Smoke density</b>	<b>%</b>	<b>60 (max)</b>	<b>52</b>
<b>Light Transmission</b>	<b>%</b>	<b>40(min)</b>	<b>48</b>
<b>HCL Emission</b>	<b>%</b>	<b>20 (max)</b>	<b>18</b>

\*\* The properties have been tested on moulded sheet

**PROCESSING TECHNIQUES:**

1. The recommended processing temperatures are 150<sup>0</sup>c to 180<sup>0</sup>c , However the processing Temperature may be adjusted as per requirement for individual operations.
2. The PVC compounds provides excellent surface finish and outstanding output rates over a broad range of extrusion running condition .
3. For smooth processing and better results it is recommended to preheat the material before use.

**DELIVERY/PACKAGES** : Pellet form and packed in 25 kg HDPE woven sacks with inner liner to ensuring prevention from uptake of moisture and contamination.

**STORAGE:**

Material shall be kept in a cool dry place.

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

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