



Technical Data Sheet

**LSJ01-OR**

**(Thermoplastic halogen-free fire retardant compound for jacketing of cable)**

**Description**

LSJ01-OR is a thermoplastic, UV resistance, oil resistance, low smoke, halogen free, flame retardant cable jacketing compound. This product to be used outdoor applications and provides excellent processing characteristics combined with superior level of fire performance, excellent flexibility, and also high mechanical properties.

**Specification:**

LSJ-OR meets the applicable requirements given below when processed using extrusion practice and testing procedure:

- IEC 60502-1 type ST8 and IEC 60092-359 type SHF1
- BS 7655:6.1 types LTS1, LTS2, LTS3, LTS4
- DIN VDE 0207, VDE 0250 part 24, Type HM2/HM4
- BS EN 50575

Physical Properties		Standard and Test Method	Unit	Typical Value
<b>Density</b>		IEC 60811-1-3	gr/cm <sup>3</sup>	1.45±0.02
<b>Properties before ageing</b>				
Tensile strength		IEC 60811-1-1	N/mm <sup>2</sup> %	min 13 min 200
Elongation at break				
<b>Properties after ageing “7days at 100°C”</b>				
Variation of Tensile strength		IEC 60811-1-2	% %	±40 ±40
Variation of Elongation at break				
<b>Tear strength</b>		BS 6469:99.1	N/mm	10
<b>Hardness</b>		ASTM D2240	Shore D	52±2
<b>Melt Flow Index(150 °C/21.6 kg)</b>		ASTM D1238	gr/10min	3
<b>Heat shock test “1 hr at 150°C”</b>				
Result to be obtained		IEC 60811-3-1	--	No Crack
<b>Oil immersion – 4 hr at 70°C</b>				
Variation of tensile strength			%	Max 20 Max 40
Variation of elongation at break				
<b>UV-Exposure for 720 Hours</b>				
Retention Tensile Strength		ASTM G 154	%	86 86
Retention Elongation				
<b>Hot pressure at 90°C</b>		IEC 60811-3-1	%	30
<b>Cold Bending test</b>		IEC 60811-1-4	--	Pass
<b>Cold impact test</b>		IEC 60811-1-4	--	pass
Burning Properties		Standard and Test Method	Unit	Typical Value
<b>Oxygen Index</b>		ASTM D2863	%	32
<b>Acid gas emission</b>	<b>PH</b>	IEC 60754-2	--	>5
	<b>Conductivity</b>		µS/mm	≤10
<b>Halogen acid gas evolution</b>		IEC 60754-1	%	Zero
<b>Smoke Density Rating</b>		ASTM D 2843	%	8
<b>Light Transmission</b>		IEC 61034	%	70
<b>Toxicity Index</b>		NES 713	-	1.7



### **Processing Condition:**

Most halogen free, low smoke materials have a melt viscosity higher than PE/PVC compounds. Such compounds require more power during processing, which leads to a rapid increase in melt temperature, as the screw speed increases.

LSJ01-OR have been processed on a variety of screw designs, but for optimum output the use of a low compression, low shear screw is recommended. A compression ratio of 1:1.2 is ideal.

As a general guide, typical processing temperature are as follows:

	zone 1	zone 2	zone 3	zone 4	head	die
max (°C)	140	145	150	155	165	175
min (°C)	130	140	145	150	160	160

### **Color**

LSJ01-OR color is natural. This product is a Colorable Compound with PE/EVA base master batch.

### **Safety**

LSJ01-OR is classified as no-dangerous material.

### **Storage**

LSJ01-OR must be stored at ambient conditions which not exceed 30 °C in closed and unbroken packaging in order to avoid exposure to direct sunlight and humidity. The compound should not contact directly with ground. And this product should be avoiding direct exposure to sunlight and weathering.

### **Packaging**

It is available in the form of pellets and supplied in PP laminated bag with a net content of 25 kg.