



Technical Data Sheet

LSI01

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

Description

LSI01 is a thermoplastic, low smoke, halogen free, flame retardant insulation compound for wire and cables which possess excellent insulation properties. This product provides excellent processing characteristics combined with superior level of fire performance, excellent flexibility, and also high mechanical properties.

Specification:

IEC 60502-1 type ST8 and IEC 60092-359 type SHF1
DIN VDE 0207, VDE 0250 part 24, Type HM2/HM4

BS7655:6.1 types LTS1, LTS2, LTS3, LTS4

Properties:

Physical Properties	Standard and Test Method	Unit	Typical Value
Density	IEC 60811-1-3	gr/cm ³	1.46±0.02
Properties before ageing			
Tensile strength	IEC 60811-1-1	N/mm ²	min 13
Elongation at break			%
Properties after ageing "7days at 100°C"			
Variation of Tensile strength	IEC 60811-1-2	%	±40
Variation of Elongation at break			%
Tear strength	BS 6469:99.1	N/mm	8
Hardness	ASTM D2240	Shore D	54±2
Melt Flow Index(150 °C/21.6 kg)	ASTM D1238	gr/10min	5±1
Heat shock test "1 hr at 150°C"			
Result to be obtained	IEC 60811-3-1	--	No Crack
Hot pressure at 90°C	IEC 60811-3-1	%	30
Cold Bending test	IEC 60811-1-4	--	Pass
Cold impact test	IEC 60811-1-4	--	pass
Burning Properties	Standard and Test Method	Unit	Typical Value
Oxygen Index	ASTM D2863	%	Min32
Acid gas emission	IEC 60754-2	--	>4.3
		Conductivity	μS/mm
Halogen acid gas evolution	IEC 60754-1	%	Zero
Smoke Density Rating	ASTM D 2843	%	8
Toxicity Index	NES 713	-	1.7
Flame spread test on single cables	IEC 60332-1	mm	>50



Technical Data Sheet

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 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	160	165	170	170
min (°C)	130	140	145	150	155	155

Colorability

LSI01 compounds are a Colorable Compound with PE/EVA base master batch.

Safety

LSI01 is classified as a no-dangerous material.

Storage

LSI01 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 avoid 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 kgs.