

Technical Data Sheet

APLSJ01

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

Description

APLSJ01 is a thermoplastic, UV resistance, low smoke, halogen free, flame retardant cable jacketing compound. This product provides excellent processing characteristics combined with superior level of fire performance, excellent flexibility, and also high mechanical properties.

Specification:

APLSJ01 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
Density	IEC 60811-1-3	gr/cm ³	1.45±0.02
Properties before ageing			
Tensile strength	IEC 60811-1-1	N/mm ² %	min 13
Elongation at break			min 200
Properties after ageing "7days at 100°C"			
Variation of Tensile strength	IEC 60811-1-2	%	+10
Variation of Elongation at break			-20
Tear strength	BS 6469:99.1	N/mm	8
Hardness	ASTM D2240	Shore D	55±1
Melt Flow Index(150 °C/21.6 kg)	ASTM D1238	gr/10min	3±0.2
Heat shock test "1 hr at 150°C"			
Result to be obtained	IEC 60811-3-1	--	No Crack
Water immersion – 7 days at 70°C			
Variation of tensile strength	BS 6469:99.1	%	-8
Variation of elongation at break			-15
UV-Exposure for 720 Hours			
Retention Tensile Strength	ASTM G 154	%	86
Retention Elongation			86
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	%	34
Acid gas emission	IEC 60754-2	--	>4.3
		μS/mm	≤10
Halogen acid gas evolution	IEC 60754-1	%	Zero
Rating Smoke Density	ASTM D 2843	%	8
Toxicity Index	NES 713	-	1.7
Flame spread test on single cables	IEC 60332-1	mm	>5

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.

APLSJ01 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	165
min (°C)	130	140	145	150	160	160

Color

APLSJ01 color is natural. This product is a Colorable Compound with PE/EVA base master batch.

Safety

APLSJ01 is classified as no-dangerous material.

Storage

APLSJ01 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.

Technical Service

Abhar Polymer Compounds Technical Service is available to help the customer to choose the best product for his requirements.

Our Technical Service is at your disposal for further information and advice about the start-up and also for any possible necessity during the use of the product.

Disclaimer

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