

GB31247 Cable Jacket Material Solution



Application Advantages

LSZH

The latest FireDefender™ LSZH product series is polyolef catalogue flame retardant material (LSZH) specially developed by ATP to meet the high flame retardant requirement of cables and optical cables. Comparing with the traditional polyolef catalogue flame retardant material, FireDefender™ experienced a longer time of research and development with more comprehensive and harsh tests. The overall promotion includes selection of raw materials, design of formulation, combination innovation of flame retardant system, innovation of lubrication system and production process control etc., which create a brand new upgraded version of LSZH material, in comparison with the conventional flame retardant polyolefin products, FireDefender™ series has the following characteristics:

1. Flame retardant reliability

- 1) Fully support the mainstream specifications of rail transit cables, power cables and other products to meet the requirements of GB31247 test (except Class A)
- 2) Very effective solution of total heat release and peak heat release rate control. The higher carbon deposition efficiency, that refers to the quickly carburized of the cable surface while burning, which form an effective protective layer. Smoke generation and halogen gas release while burning fully meet the requirements of the regulations.

2. Safety and reliability:

pass comprehensive tests, which includes aging resistance, heat resistance, environmental resistance and etc.;

3. Good wear resistance:

provided with better wear resistance and scratch resistance than the others in a same testing condition;

4. Good process-ability:

fully meet the requirements of high-speed extruding, line diameter rounded and Stable, less salivation (less die stock), good color stability and higher yield rate;

5. Quality control:

batch stability and homogeneity guarantee.

Properties Datasheet

Item	Material properties	Test standard	Test condition	Unit	Model	Model
					5833C-HSS-0001S	5834B-HSS-0001S
Physical characteristics	Hardness	DIN 53505	155	Shore A	97	93
	Proportion	DIN 53479	-	g/cm ³	1.52	1.55
	Brittle temperature	ISO 812	-	°C	-20	-20
mechanical properties	Elongation	DIN 53504	200mm/min	%	150	150
	Tensile Strength	DIN 53504	200mm/min	Mpa	10	12.5
Hot air aging	Heat aging condition	DIN 53504	158°C/168h	%	110×240	100×240
	Tensile Strength/ Break Elongation	DIN 53504	158°C/168h	%	115/88	105/86
Electrical performance	Volume resistivity	ASTM D257	-	Ω·m	2.5×10 ¹²	6.1×10 ¹²
	Dielectric strength	ASTM D149	-	MV/m	24	24
Combustion performance	Oxygen index	ASTM D2863	-	%	40	42
Feature					90 °C flame retardant wire and cable with high flame retardant sheath material, meet the CPR - Cca and GB 31247 B2 flame retardant grade test, is suitable for the communication data transmission network cable, etc	High flame retardant cable materials, through vw-1, class A and CPR-B2ca and GB 31247 B1 flame retardant grading test, suitable for rail transit, shopping malls and other densely populated places



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