

1. Information about the goods and manufacturer

Name of Goods

Halogen Free Flame-retardant Normal Wall Heat Shrink Tubing, Shrink ratio 3:1

Description of Goods

Irradiated Polyolefin Normal Wall Heat Shrink Tubing

Name of Manufacturer or Supplier of the goods

Premier Farnell plc

150 Armley Road, Leeds, LS12 2QQ

+44 (0) 8701 202530

1.4. Emergency telephone number

+44 1865 407333

2. Chemical Properties

Ingredient	Chemical Formula	Function	Percentage	CAS No.
Ethylene-vinyl acetate copolymer	$(\text{CH}_2\text{-CH}_2)_m\text{-}(\text{CH}_2\text{-CHCOOCH}_3)_n$	Main Material	50%	24937-78-8
Magnesium hydroxide	$\text{Mg}(\text{OH})_2$	Flame Retardants	35%	1309-42-8
Phosphorus	P	Flame Retardants	10%	7723-14-0
Pigment	Pigment	Colorant	5%	-

3. Hazard Information

Key Hazards

Toxicological Effects on Health: After the tubes are ignited, the flame will self-extinguish in a short time. A little fume will give off and have slight harm on the respiratory passage of the human body.

Influence on Environment: It will cause air pollution when the tubes burn.

Physical and Chemical Hazards: Normally it is in tubular shape, and shrink at 70-125°C, which perhaps is harmful.

Special Hazards: When roasted or fumigated, the smoke given off will have impact on the eyes and respiratory system, and is harmful to the human body.

Main symptoms: Weep, sneeze, cough, etc. These symptoms can be relieved through breathing fresh air.

Hazards generated when burning: The tubing will burn for a short period of time after being ignited.

4. First-Aid Measures

First-aid measures for exposing in different occasions:

Inhalation	: During proper operation, there is no danger caused by inhalation.
Skin contact	: No damage to skin in normal contact. As skin is easily scratched by the tubes, the operators are suggested to put on gloves in operation.
Eye contact	: No harm.
Ingestion	: Not edible
Key harmful effects	: It will impact the respiratory System if you inhale smokes generated by the burning of the tubes.
Protective measures for the rescuers	: Wear respiration protection equipment.

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Suggestions to doctor : Those who have suffered severe damage in respiratory system should keep on inhaling fresh air to relieve the symptom.

5. Fire-fighting Measures

Suitable fire-extinguishing agent : Dry Powder Extinguisher should be used in order to put out the fire in a short time.

Special harms possibly incurred in fire-fighting : Small amount of smoke will give off when the tubes burn, which will impact the respiratory system of human body.

Special fire-fighting procedures : No

Special protective equipment for the fire-fighters : Normal fire-extinguishing equipment.

6. Emergency measures for leakage

Attentions need to be paid by individuals : No

Environmental notice : No

Cleaning Method : No

7. Operation and Storage

Operation : The tubes will shrink when heated by oven or heat gun.

Storage : Pack the tubes with cartons properly and place them at a shady place and at normal temperature.

8. Contact controls and personal protection

Contact controls : Not harmful

Personal protective measures : No

9. Physical and Chemical Properties

Properties		Test Method	Test result	
Physical Properties	Tensile strength /MPa	GB/T1040	≥10.4	
	Elongation/%	GB/T1040	≥200	
	Tensile strength after aging/MPa	UL 224: 158°C×168hr	≥7.3	
	Elongation after aging/%	UL 224: 158°C×168hr	≥100	
	Heat Resistance	UL 224: 250°C×4hr	No viscosity No Cracking	
	Cold blend	UL 224: -30°C×4hr	No Cracking	
Electrical Properties	Dielectric Strength(KV/mm)	GB/T1408	≥15	
	Dielectric Withstand	300V	UL 224	No breakdown at 1500V
		600V	UL 224	No breakdown at 2500V
Volume resistance/Ω·cm	GB/T1410	≥1×10 ¹⁴		
Chemical Properties	Anti Corrosion	UL 224 158°C×168hr	PASS	
	Copper stability	UL 224 158°C×168hr	PASS	
	Flammability	UL 224	VW-1	

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10. Stability and Reactivity of the goods

Stability : Irresolvable
Hazardous effects under special conditions : If exposed to fire, the products will burn in a short time and give off smoke.
Conditions to be avoided : The products will shrink under high temperature.
Substance to be avoided : Fire
Hazardous decomposition product : Smoke

11. Toxicological Information

Acute Toxicity : No
Partial Effect : No
Allergic Reactions : No
Slow toxicity or long-term toxicity : No
Special Effects : No

12. Ecological Information

Possible effects on environment : The products are irresolvable naturally and are not harmful to animals, plants and aquatic life.

13. Waste Disposal

Trash disposal : It is suggested that the waste be collected to waste-collection station for treatment.

14. Transport Information

Regulations on international transportation : No
U.N. code : No
Regulations on Domestic transportation : No
Special transportation method and notice : Avoid distortion caused by extrusion and damage caused by edged tools.

15. Regulation Information

Applicable regulation : UL224 (All Except Clear)

16: Other information

NA

Part Number
HS511-1.22M
HS511-5M

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