

1. Information about the goods and manufacturer

Name of Goods

Dual Wall Flame-retardant Heat Shrink Tubing

Description of Goods

Irradiated Polyolefin Heat Shrink Tubing with meltable adhesive liner

Name of Manufacturer or Supplier of the goods

Premier Farnell
150 Armley Road
Leeds LS12 2QQ
Tel. : +44 (0) 870 129 8608

Emergency telephone number

+44 (0) 870 202530

2. Chemical Properties

Ingredient	Chemical Formula	Function	Percentage	Supplier	CAS No.
Polyolefin	(CH ₂ CH ₂) _n	Main Material	50%	China Sinopec	9002-88-4
Magnesium hydroxide	Mg(OH) ₂	Flame Retardants	30%	Jinhaohui Material Co., Ltd.	1309-42-8
APP	-	Flame Retardants	10%	Shanghai Haiyi Co., Ltd	7723-14-0
Pigment	Pigment	Colorant	5%	Huawancai Co., Ltd	83524-75-8
Ho-melt Adhesive	EVA	Sealant	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°C to 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.

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

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

Outer Jacket

Features	Properties	Test Method	Test result
Physical Properties	Tensile strength /MPa	ASTM D2671	≥10.4
	Elongation%	ASTM D2671	≥300
	Tensile strength after aging/MPa	UL 224: 158°C × 168hr	≥7.3
	Elongation after aging%	UL 224: 158°C × 168hr	≥200
	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)	IEC243	≥20
	Volume resistance / Ω-cm	IEC93	≥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
	Water Absorption %	ASTM-D570	≤0.5

Hot-melt adhesive

Properties	Test Method	Test result
Water Absorption	ASTM D570	≤0.2
Softening Point	ASTM E28	95°C
Peel Strength (PE)	ASTM D1000	120N/25mm
Peel Strength (AL)	ASTM D1000	80N/25mm

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

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.

Special Effects

No

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

Part Number Table

Description	Part Number
Heat Shrink, Black, 4mm, 1.2m	HS400
Heat Shrink, Sleeving, 6mm, 4:1	HS401
Heat Shrink, Sleeving, 8mm, 4:1	HS402
Heat Shrink, Sleeving, 12mm, 4:1	HS403
Heat Shrink, Black, 16mm, 1.2m	HS404
Heat Shrink, 20mm, Black, 1.2m	HS405
Heat Shrink, Adhesive, Black, 24mm, 1.2m	HS406

Description	Part Number
Heat Shrink, Adhesive, Black, 32mm, 1.2m	HS407
Heat Shrink, Sleeving, 52mm, 4:1	HS408
Heat Shrink, Sleeving, 4mm, 4:1, 5m	HS409
Heat Shrink, Sleeving, 6mm, 4:1, 5m	HS410
Heat Shrink, Sleeving, 8mm, 4:1, 5m	HS411
Heat Shrink, Sleeving, 12mm, 4:1, 5m	HS412

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