

1. Information about the goods and manufacturer

Product identifier

Name of Goods : 3:1 Dual Wall Flame-retardant Heat Shrink Tubing
 Description of Goods : Irradiated Polyolefin Heat Shrink Tubing with meltable adhesive liner

Details of the supplier of the safety data sheet

Premier Farnell
 150 Armley Road
 Leeds LS12 2QQ
 Tel. : +44 (0) 8701 202530

Emergency telephone number

+44 1865 407333

2. Chemical Properties

Ingredient	Chemical Formula	Function	Percentage	CAS No.
Ethylene-vinylacetate copolymer	$(\text{CH}_2\text{CH}_2)_m\text{-(CH}_2\text{-CH-COOCH}_3)_n$	Main Material	50%	24937-78-8
Magnesium hydroxide	Mg(OH)_2	Flame Retardants	30%	1309-42-8
DBDPE	$\text{C}_{14}\text{H}_4\text{Br}_{10}$	Flame Retardants	10%	84852-53-9
Anti-oxide	$\text{C}_{35}\text{H}_{62}\text{O}_3$	Antioxidant	1%	6683-19-8
Pigment	Pigment	Colorant	4%	1333-86-4
Printing Ink	-	Print	-	-
EVA	$(\text{C}_2\text{H}_4)_x\text{.(C}_4\text{H}_26\text{O}_2)_y$	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 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 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	ASTM D2671	≥12.0
	Elongation/%	ASTM D2671	≥300
	Longitudinal Shrinkage	UL224	±8%
	Elongation after aging/%	UL 224: 158°C ×168hr	≥200
Electrical Properties	Dielectric Strength (KV/mm)	IEC243	≥15
	Volume resistance/Ω·cm	UL224	≥1×10 ¹⁴
Chemical Properties	Corrosion	ASTM D2671	No corrosion
	Copper stability	UL 224	PASS
	Flammability	UL 224	VW-1

Hot-melt adhesive

Property	Test Method	Test result
Water Absorption	ISO 62	≤0.2%

Property	Test Method	Test result
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
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

16. Other Information

NA

Part Number
HS122 1.2M

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.