

Material Safety Data Sheet

1. Product & Company Identification

Product:	Heat Shrink Tubing with meltable adhesive liner
Manufacturer:	Conrad Electronic SE
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
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2. Chemical Properties

Ingredient	Chemical Formula	Function	Percentage
Polyolefin	(CH ₂ CH ₂) _n	Main Material	50%
Magnesium hydroxide	Mg(OH) ₂	Flame Retardants	30%
APP	-	Flame Retardants	10%
Pigment	Pigment	Colorant	5%
Hot-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 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 100°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.

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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.

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.

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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

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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 streng thafteraging/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

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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

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

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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. Regulatory Information

No

16. Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

*****End of report*****