Heat Shrink Tubing 4/1 mm

Heat shrink tubing, shrink ratio 4:1
black + red, 2 × 1 m



Read this manual before use. The tubing is flammable – do not heat it with an open flame.

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Contents

1. Product description

1.1 Purpose

1.2 Technical data and package contents

2. Use

2.1 Choosing the right size

2.2 Procedure

2.3 Safety and guidelines

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

3.2 Disposal

4. Warranty and rights arising from defective performance

1. Product description

1.1 Purpose

Heat shrink tubing is a thin-walled tube made of radiation cross-linked polyolefin which shrinks when heated and fits tightly around the object it has been slipped over. It forms a close-fitting layer that provides electrical insulation, mechanical protection and also protection against corrosion.

The tubing has a shrink ratio of **4:1** – it shrinks from a diameter of 4 mm down to as little as 1 mm. A single size therefore covers a wide range of cable and solder joint diameters. In FPV and RC modelling it is typically used to insulate soldered wire joints, connectors and small electronics. The two colours (black and red) make it easier to tell the polarity apart.



Tubing 4/1 mm, black and red

1.2 Technical data and package contents

Material	cross-linked polyolefin, halogen-free, no adhesive lining
Shrink ratio	4:1
Min. inner diameter before shrinking	4 mm
Max. inner diameter after full shrinking	1 mm
Wall thickness after full shrinking	1 mm
Longitudinal change after shrinking	+5 % to −10 %
Operating temperature	−55 °C to +125 °C
Dielectric strength	min. 16 kV/mm
Flammability	flammable, class HB according to UL 94
Type designation	RCH1 4/1×1
Manufacturer	RADPOL S.A., Poland
Package contents	1 m black, 1 m red
Not included	heat gun or any other heat source, soldering iron, wires, cutting tools

2. Use

2.1 Choosing the right size

Before shrinking, the tubing must slide freely over the widest point of the object to be insulated (e.g. a solder joint or connector) – its inner diameter before shrinking is at least 4 mm. To fit tightly after shrinking, the object must be wider at its narrowest point than the inner diameter of the tubing after full shrinking, i.e. wider than 1 mm.

On a thinner object the tubing will not fit tightly; for an object the tubing cannot be slipped over, choose a larger size of tubing.

2.2 Procedure

① Cut the required length squarely with sharp scissors or a knife. The length may change by +5 % to −10 % when shrinking – leave an overlap on both sides of the joint.

② **Slip the tubing onto the wire before soldering** and keep it far enough from the soldering point so that the heat of the soldering iron does not shrink it prematurely.

③ Solder the joint and let it cool. Make sure no sharp wire ends stick out that could pierce the tubing.

④ Slide the tubing over the joint so that it covers the whole joint with an overlap onto the wire insulation.

⑤ Heat the tubing evenly from all sides with a heat gun – start in the middle and work towards the ends so that no air is trapped under the tubing. Rotate the wire while heating.

⑥ Stop heating as soon as the tubing fits tightly against the surface along its entire length. Let it cool down before handling the joint.

2.3 Safety and guidelines

- The tubing is **flammable**. Do not heat it with an open flame (lighter, torch) – it can scorch or catch fire. Use a heat gun.
- Do not overheat it – overheated tubing discolours, blisters or cracks. Set the heat gun (see its manual) so that the tubing shrinks smoothly.
- The heat gun, tubing and joint are hot after heating – risk of burns. Work on a non-flammable surface in a well-ventilated area.
- Never work on live equipment. With FPV equipment, always disconnect the battery first.
- The tubing has no inner adhesive layer. Where a watertight seal is required, use adhesive-lined tubing.
- Store the tubing in a dry place, away from direct heat and out of the reach of children.

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

3.2 Disposal

- The product is not electrical equipment and does not contain batteries; the take-back scheme for electrical equipment does not apply to it.
- Dispose of tubing offcuts and the packaging in accordance with local waste management regulations. Put the packaging into separated waste collection.
- Do not burn tubing waste.

4. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 3.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.