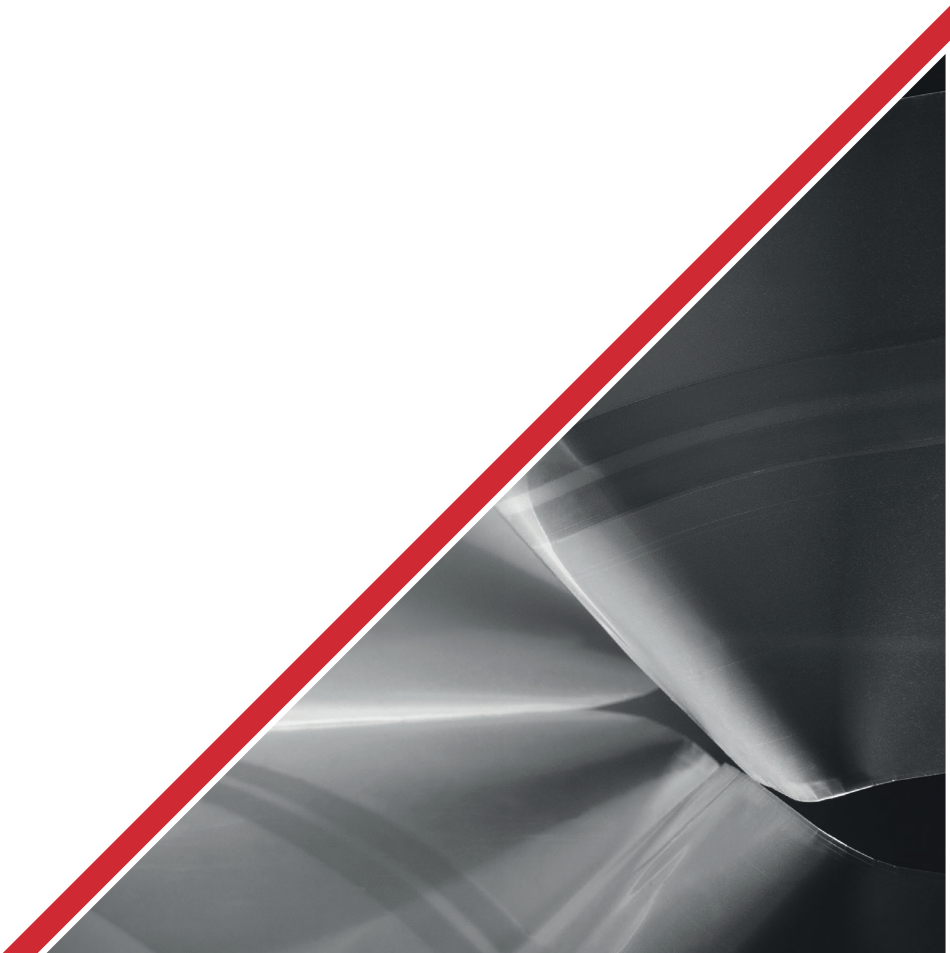
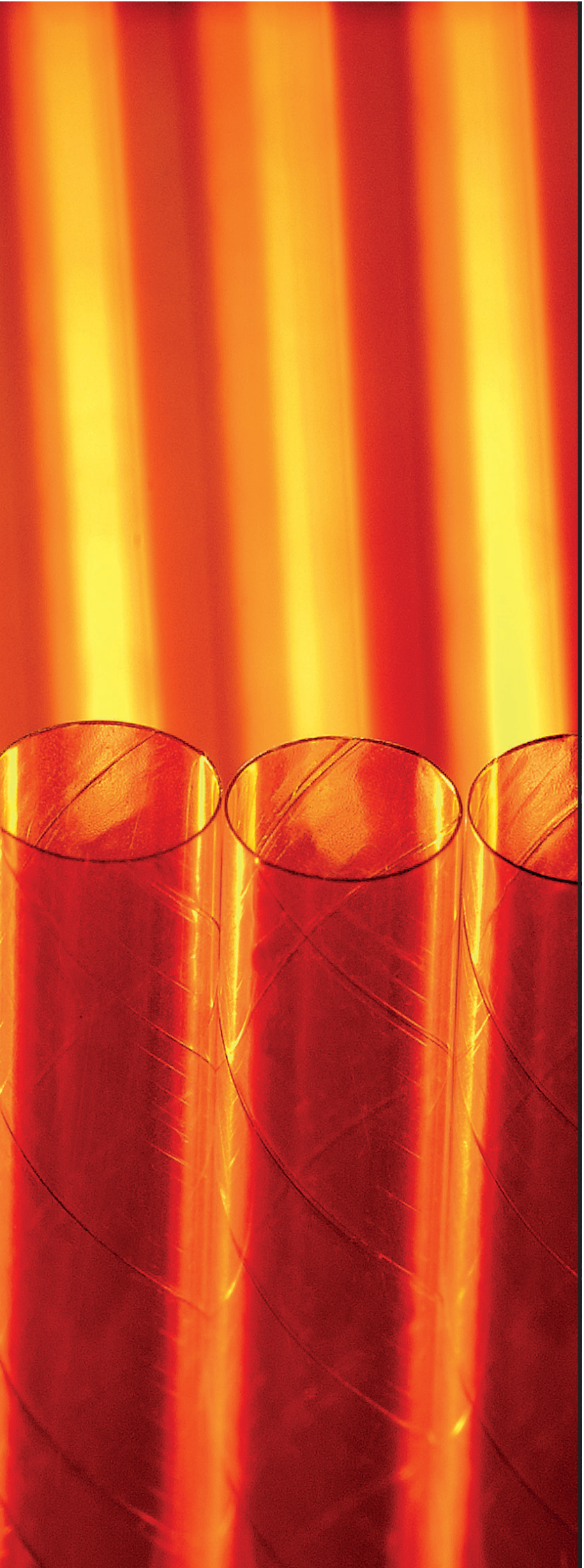
POLITUBES

HI-TECH TUBING SINCE 1969





POLITUBES

HI-TECH TUBING SINCE 1969

We are an Italian company that enthusiastically pursues a tradition commenced back in 1969 with the production of parts and components for the electromechanical and automotive market. Forty years of experience make Politubes **the European leader in the production of spiral wound tubes and endcaps** intended for the electrical and thermal insulation, brushless motor, compressor and transformer markets or used as protections. Politubes also specialises in the surface finish of plastic films for the tyre, printed circuit and power wire industries.

> “Hi-tech precision components resulting from exclusive know-how acquired in over 40 years of experience”

Politubes manufactures in-house, in a 4000 square-metre factory in Italy.

Passion for quality in every detail

E350605
Repackaged Recognized Components

Certificazione ISO 9001-2008
Politubes is ISO 9001 : 2008 certified by Lloyd's Register Quality Assurance

Tubes

Flat/cigarette tubes

The flat tube, better known as the cigarette tube, is made by overlapping the film edges to create a small overlap.

The dielectric rigidity features of the film used remain unaltered.

It has the benefit of being supplied wound in rolls or bobbins, an essential advantage for automatic machines.

This product may be customised in different colours according to the customer's specific needs.

These tubes are mainly used to: protect and join various components and wires in electric motors and compressors or for bus bar insulation.

The tubes are supplied with internal diameter ranging between 10 and 90 mm and **thickness** between 50 and 180 micron.

Spiral wound tubes

The spiral wound technique consists of pairing a series of tapes coated with adhesive and rolling them up in a spiral around a spindle to achieve the tube.

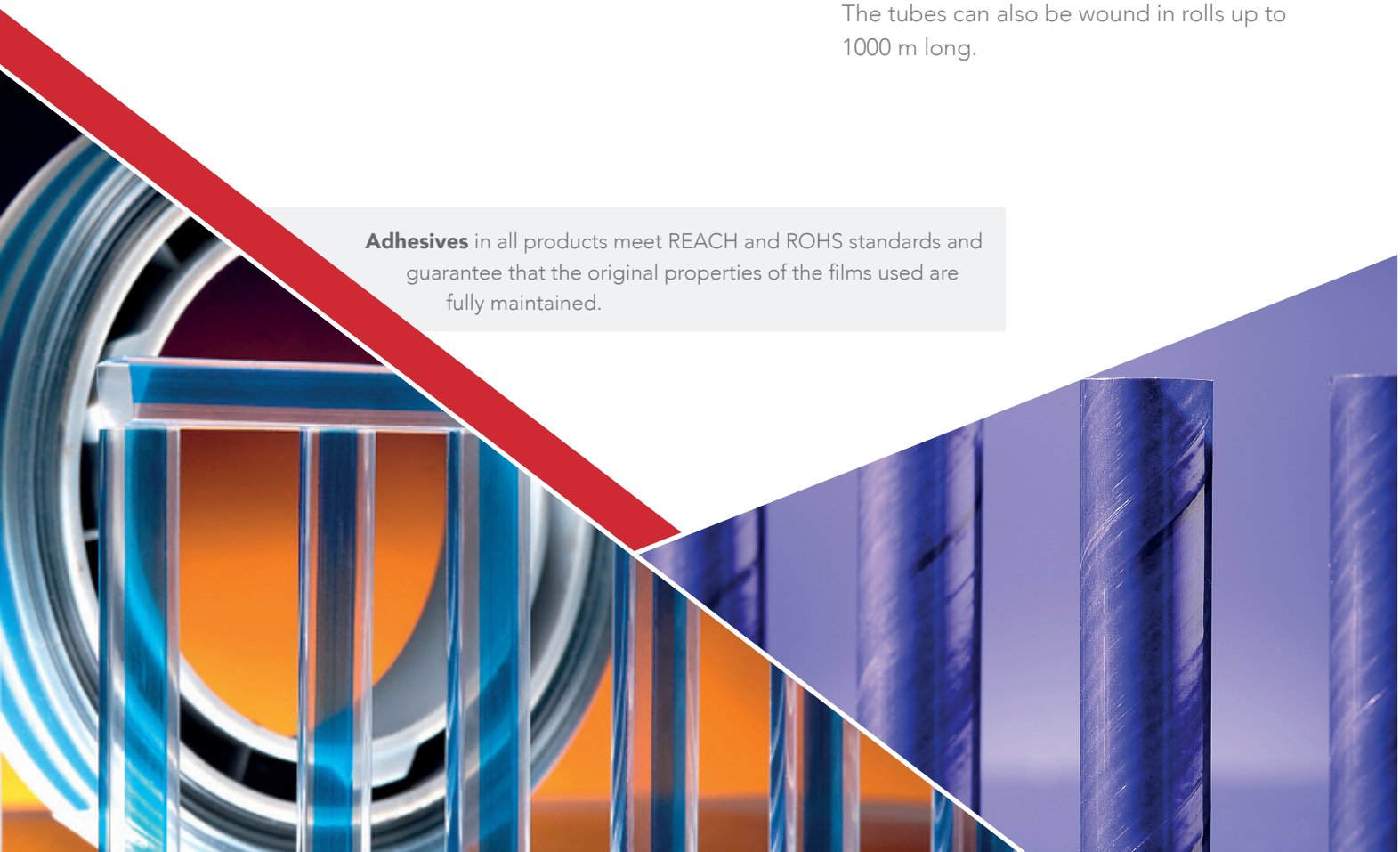
The **raw materials** used, including Nomex®, Polyester A (Mylar® A), Heat shrink Polyester HS (Mylar® HS), Semi-heat shrink Polyester AHS, Polyimide film (Kapton®), are supplied by the industry's world leaders (DuPontTM, Saint-Gobain, Mitsubishi etc.), are all UL certified and provide excellent electric, thermal, chemical and environmental insulation.

Accurately combined, they can be used in a wide range of **temperatures** between -269°C and + 400°C.

Thickness ranges between 0.05 and 0.8 mm, diameter between 1.6 and 180 mm, and length between 6.6 and 14,000 mm. Custom colours are available throughout, including stripes for easy identification.

The tubes can also be wound in rolls up to 1000 m long.

Adhesives in all products meet REACH and ROHS standards and guarantee that the original properties of the films used are fully maintained.



Endcaps

Spiral wound endcaps
ultrasonically sealed

Ultrasonically sealed spiral wound endcaps provide a hermetic seal on one side that guarantees perfect and fast positioning, also thanks to the heat shrink technique.

The ultrasound seal is based on multi-layered spiral wound tubes.

The **raw materials** used, including Polyester A (Mylar® A), Heat shrink Polyester HS (Mylar® HS), Nomex®, Semi-heat shrink Polyester AHS, Polyimide film (Kapton®), are supplied by the industry's world leaders, are all UL certified and provide excellent electric, thermal, chemical and environmental insulation.

Accurately combined, they can be used in a wide range of temperatures between -269°C and +400°C.

We also offer ultrasonic seals using Polyimide films.

Endcaps are supplied with internal diameter ranging between 2 and 130 mm and **thickness** between 100 and 600 micron.

The standard seal length is between 4 and 5 mm; different seal lengths can be set based on our customers' needs.

Endcaps are also supplied in custom colours, including stripes for easy identification.

Spiral wound endcaps
ultrasonically spot-sealed

Ultrasonically spot-sealed spiral wound encaps have the advantage of narrower seal widths compared to classic ultrasonically sealed ones, which run the entire length of the tube.

The product offers perfect and fast positioning, also thanks to the heat shrink technique.

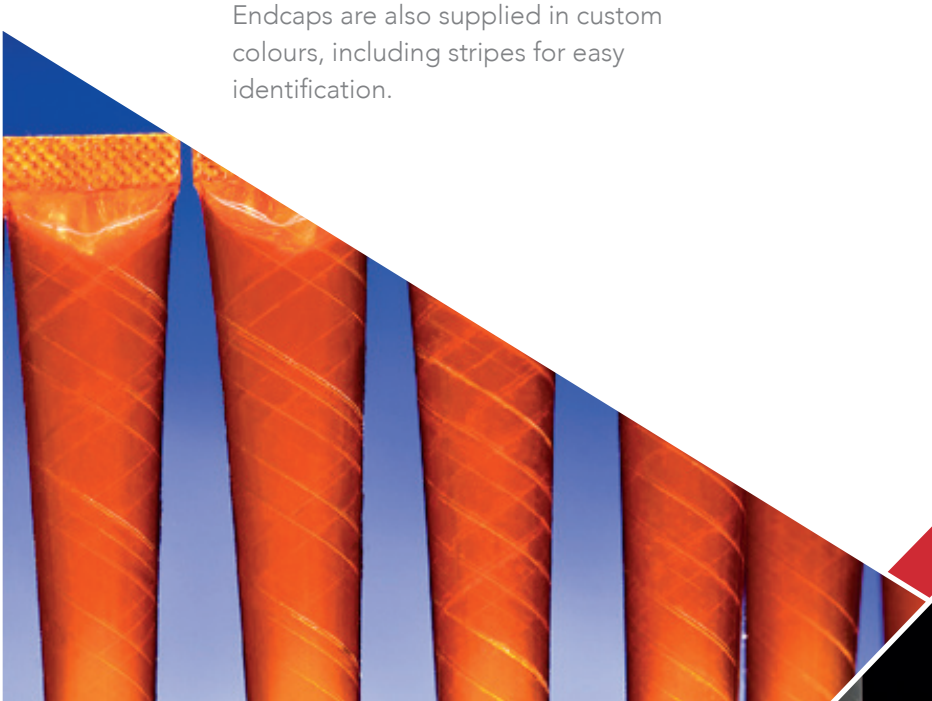
The **raw materials** used, including Nomex®, Polyester A (Mylar® A), Heat shrink Polyester HS (Mylar® HS), Semi-heat shrink Polyester AHS, Polyimide film (Kapton®), are supplied by the industry's world leaders, are all UL certified and provide excellent electric, chemical and environmental insulation.

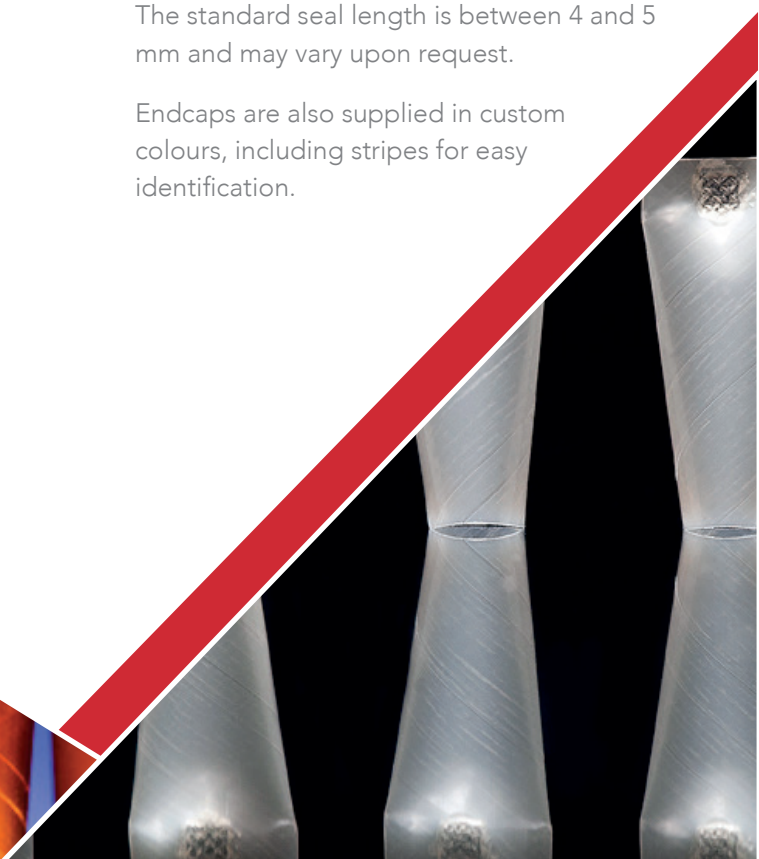
Accurately combined, they can be used in a wide range of **temperatures** between -269°C and +400°C.

Endcaps are supplied with internal diameter ranging between 4 and 30 mm and **thickness** between 100 and 600 micron.

The standard seal length is between 4 and 5 mm and may vary upon request.

Endcaps are also supplied in custom colours, including stripes for easy identification.





Endcaps

Spiral wound endcap
bullnose

Bullnose spiral wound endcaps enable the tube width to be reduced at one end, helping its insertion into the copper windings of electrical motors and avoiding damage to the enamelled wire.

The bullnose end lets the cap maintain the tube's diameter in the seal area, reducing its overall size.

The product offers perfect and fast positioning, also thanks to the heat shrink technique.

The **raw materials** used, including Nomex®, Polyester A (Mylar® A), Heat shrink Polyester HS (Mylar® HS), Semi-heat shrink Polyester AHS, Polyimide film (Kapton®), are supplied by the industry's world leaders, are all UL certified and provide excellent electric, chemical and environmental insulation.

Accurately combined, they can be used in a wide range of **temperatures** between -269°C and +400°C.

Bullnose endcaps are supplied with internal diameter ranging between 5 and 12 mm and **thickness** between 100 and 500 micron.

The standard seal length is between 4 and 5 mm and may vary upon request.

Endcaps are also supplied in custom colours, including stripes for easy identification.

Spiral wound semi-caps
with closed radius

Semi-caps have a closed radius that ensures the easy and damage-free insertion of gaskets in mechanical parts with sharp edges.

They are used for the easy insertion and protection of O-rings in combustion engines to avoid damage; the closed radius also prevents caps from slipping on the valve.

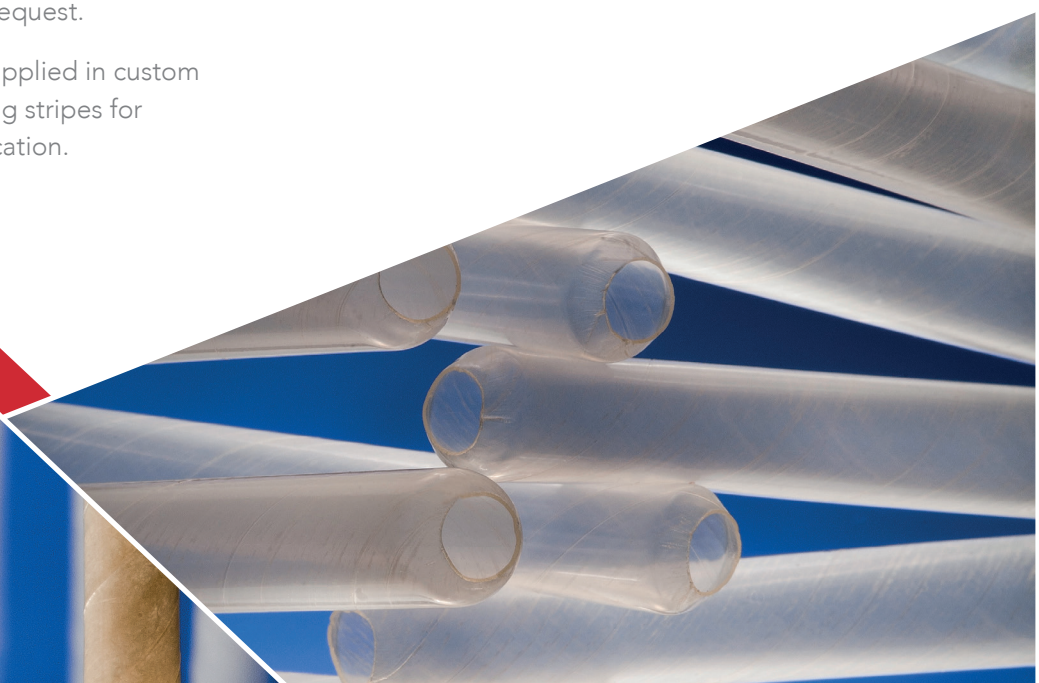
This product is also used when inserting Dunlop, Schrader and Presta valves in tyres to prevent the valve metal from damaging the tyre.

The **raw material** used is UL certified Semi-heat shrink polyester AHS.

Semi-caps are supplied with internal diameter ranging between 5 and 12 mm, **thickness** between 75 and 150 micron, and length over 7 mm.

The closed radius can be between 2 and 5 mm long.

The semi-caps are also supplied in custom colours, including stripes for easy identification.



Special applications

Heat shrink tubes
for permanent Brushless Motor magnet seals

In association with DuPontTM, Politubes has developed and patented a special heat shrink polyester (**Mylar® HS**) spiral wound tube; this tube is fitted on the rotor with the magnets in position and immediately heat shrunk to obtain a strong bond between the magnets and rotor even at high rotation speed.

It is used for motors that run at **temperatures** between - 70 / - 130° C.

It is supplied with internal diameter ranging between 15 and 85 mm and **thickness** between 100 and 250 micron.

Even after being heat shrunk, the tube does not interfere with the ventilation duct and magnetic motor flow.

Patent pending
N° EP13153906

Heat shrink tube
for universal washing machine motor rotors

Politubes offers a unique solution for universal washing machine rotors.

The tube is produced using heat shrink polyester (**Mylar® HS**) and its function is to protect the rotor magnets against dust and compact the rotor surface where there are grooves, reducing noise by various decibels.

Thanks to perfect insertion automation and instant tube heat shrinking on the rotor, the product is perfectly suited for automated production processes.

It is supplied with **thickness** ranging between 50 and 100 micron, wound on rolls several hundred metres long to optimise logistics and reduce transport costs.

Even after being heat shrunk, the tube does not interfere with the ventilation duct and magnetic motor flow.

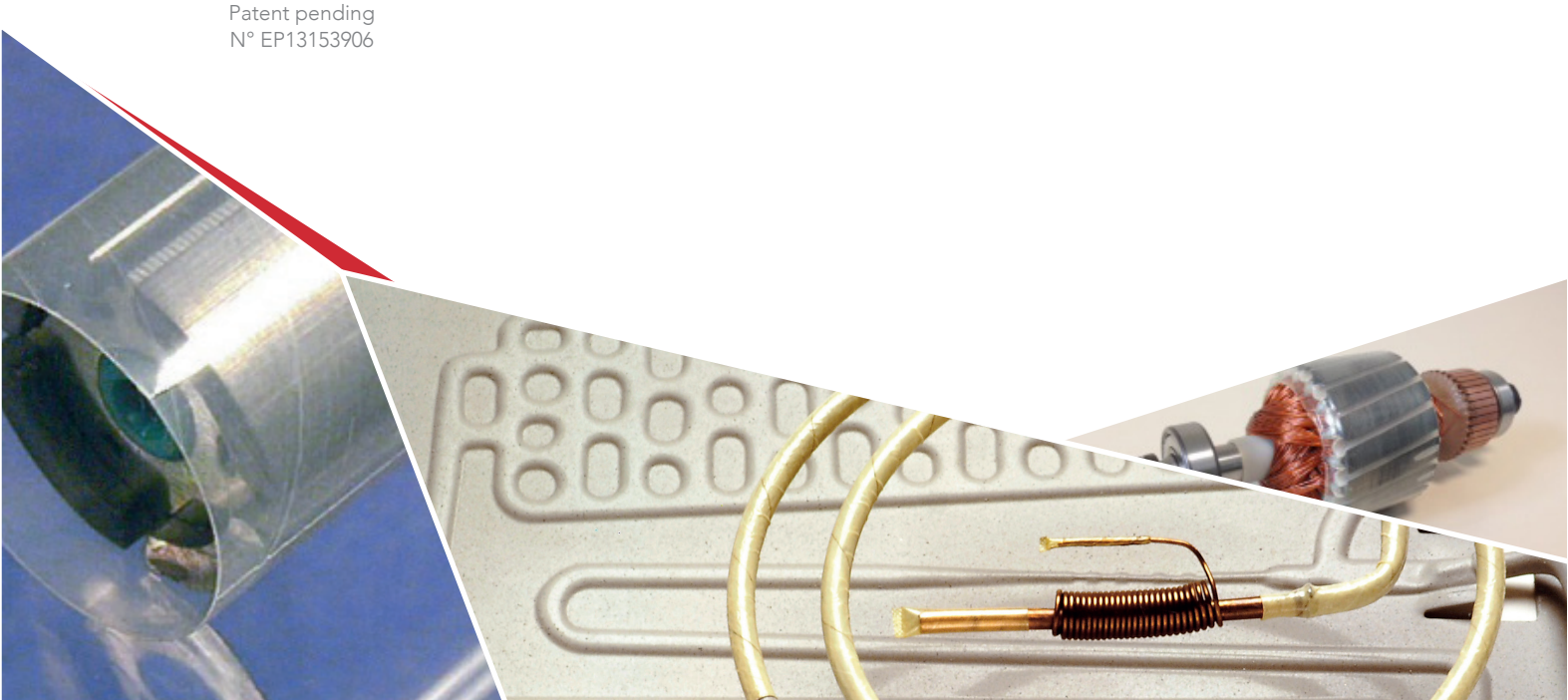
Protection tube
for refrigerator coils

Politubes offers a wide range of both spiral wound and "double cigarette" **heat shrink polyester** tubes to protect refrigerator coils.

Significant advantages: tube adaption to the coil form, positioning and heat shrink speed, excellent mechanical resistance and durability, maximum condensation protection, less space occupied due to low **thickness**, more environmentally friendly, and transparent to allow for visual coil inspection.

The tubes are supplied with diameter ranging between 4 and 25 mm and thickness between 75 and 160 micron.

They can be supplied pre-cut to the required length or wound in rolls up to a couple of hundred of metres long to optimise logistics and reduce transport costs.



POLITUBES

HI-TECH TUBING SINCE 1969

Politubes S.r.l.
Via Fermi 9/11
20875 Burago Molgora (MB) - Italy
VAT IT 07346410967

orders@politubes.it
Tel +39 039 905491 - Fax +39 039 9054990
www.politubes.it