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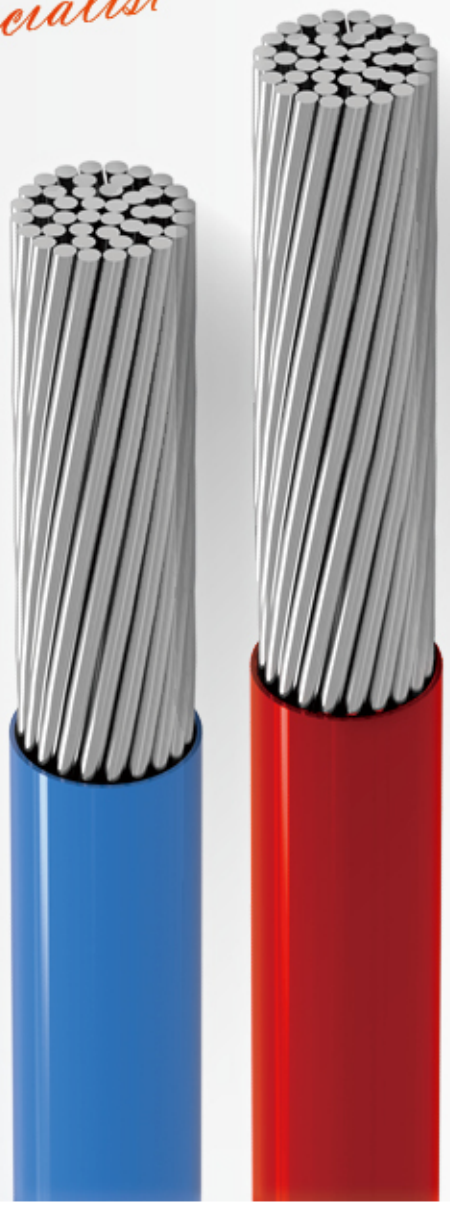
ENERPIA

HEAT RESISTANT WIRE

SMART HEATING SYSTEM

Smart heating specialist



ENERPIA strives to create
a warm and safe world.

ENERPIA
Smart heating specialist

Enerpia heat-resistant wire can be used in **various fields !**

They include internal wiring in high-temperature environments, heating parts of electric heating devices, communication equipment, home appliances, high-temperature wiring, etc.

In addition to R&D, manufacturing, and construction of various heating products such as heating cables, snow melting cables, electric hot water pipes, and heating films under our own brand, Enerpia Co., Ltd., is also capable of producing and supplying heat-resistant wires that meet customer needs, providing high-quality heat-resistant wire services.

Wires made of insulating material can be manufactured with a thinner insulation cover than ordinary wires, and have superior strength against deterioration compared to other materials, which allow them to be resistant to external heat, moisture, and oil.
The wires are applied to many aspects of real-life situations such as internal wiring of equipment, aviation, steel making, and communication equipment.

Smart heating specialist

ENERPIA
HEATING
SYSTEM

We strive to create a world where everyone can enjoy a safe and high quality of life.

Why choose Enerpia heat resistant wires?

Why?

High chemical resistance and excellent mechanical strength

Excellent chemical, electrical and thermal properties with the ability to adapt to special environments easily

Low dielectric permittivity, which means there is little influence due to frequency and temperature changes

High heat resistance makes it suitable for high temperature environments

Not easily contaminated

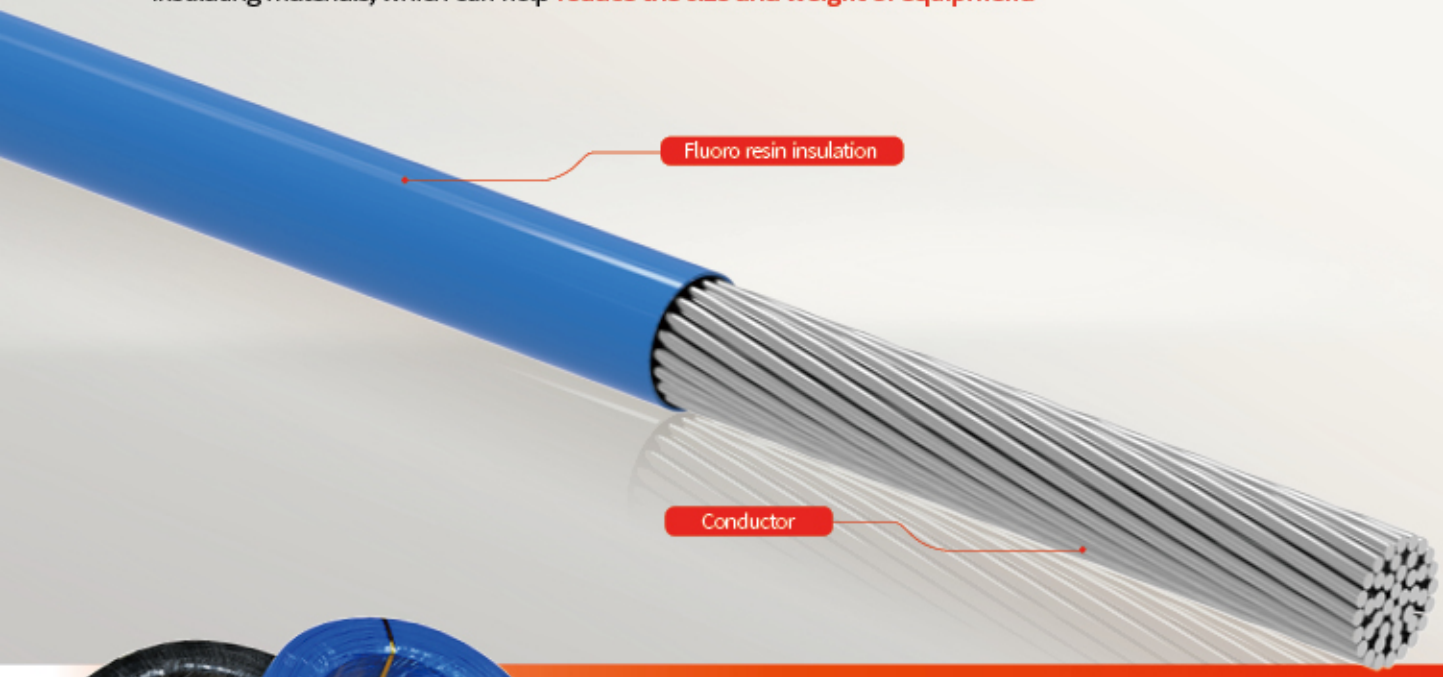
Can be used for various purposes

Eco-friendly material that is harmless to the human body and does not generate harmful gases

Safe with the use of non-electromagnetic heating wires! Structural diagram of Enerpia Teflon heat-resistant wire

Heat-resistant wires coated by extruding Teflon on conductors.

Unlike other materials, **depending on the resin material, the unique characteristics of wires are maintained even at cryogenic and extremely high temperatures.** Also, the insulation thickness can be made thinner than other insulating materials, which can help **reduce the size and weight of equipment.**



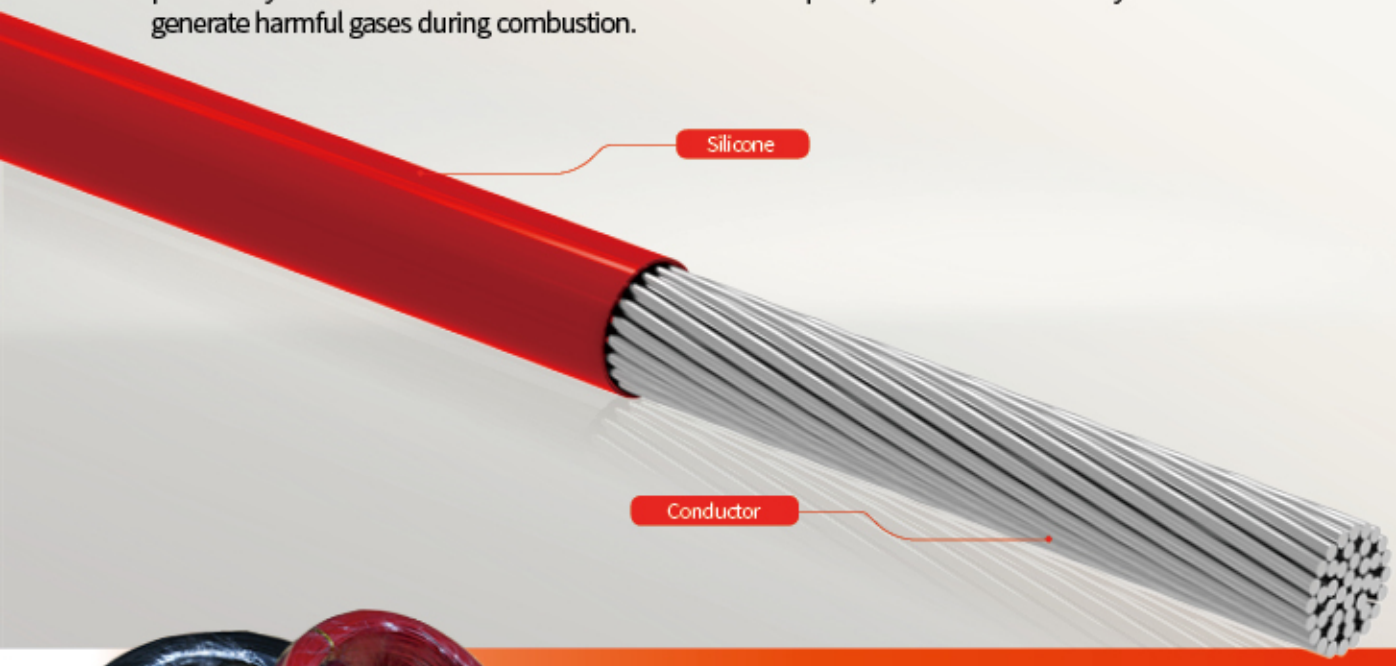
Best product for all industries! Teflon Heat Resistant Wire

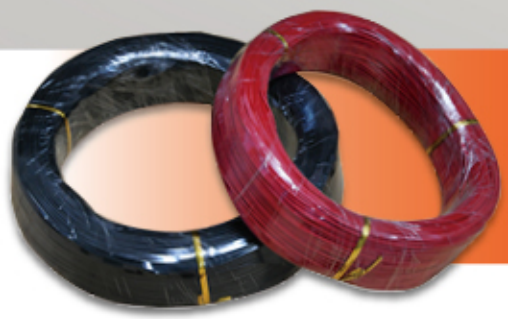
- **Heat and cold resistance**
  Best material for use in cryogenic and extremely high temperature environments, and there is no change in physical and electrical characteristics at continuous operating temperatures of -100 to 260°C
- **Flame retardant** (non-flammable)
  As an eco-friendly material that has excellent flame retardancy and does not generate harmful gases during combustion, it is widely used for wires and heaters that require flame retardant properties.
- **Non-adhesive**
  Almost all substances do not stick to the Teflon-coated surface, so they are not easily contaminated.
- **Low friction coefficient**
  Excellent wear resistance with a friction coefficient of approx. 0.25.
- **Chemical resistance**
  Teflon is generally safe for all chemical products.
- **Electrical characteristics**
  Teflon has very high electrical properties even within a wide frequency range and has excellent electrical insulation performance.

Safe with the use of non-electromagnetic heating wires! Structural diagram of Enerpia Silicon heat-resistant wire

Heat-resistant wires coated by extrusion with high strength, high tear silicon rubber on conductors

As a wire using the unique characteristics of silicone rubber with excellent flexibility and heat resistance, it is particularly excellent for radiation and ozone in the atmosphere, and is an eco-friendly material that does not generate harmful gases during combustion.





Best product for all industries! Silicon Heat Resistant Wire

- **Heat and cold resistance**
  Best material for use in cryogenic and extremely high temperature environments, and there is no change in physical and electrical characteristics at continuous operating temperatures of -60 to 200°C

- **Flame retardant** (non-flammable)
  As an eco-friendly material that has excellent flame retardancy and does not generate harmful gases during combustion, it is widely used for wires and heaters that require flame retardant properties.

- **Electrical properties**
  Widely used as an electrical insulating material because of its excellent electrical insulation performance, voltage resistance, flexibility, and arc resistance.

- **Ozone and weather resistance**
  Silicone rubber is an extremely good material in resisting ultraviolet rays, radiation, and ozone in the atmosphere, which are the main causes of aging of general organic rubber, and has excellent water resistance, steam resistance, and acid resistance.

- **Tasteless, odorless and nontoxic**
  Harmless to the human body, and is an eco-friendly material widely used for medical and food devices in addition to electric wires.

- **Mechanical properties**
  Compared to other organic rubbers, it has excellent tensile strength, tear strength, and elasticity properties.

Heat resistant wire specifications by product

Specifications of Teflon wire

AWG standard	Cross-sectional area (㎟)	Conductor		Insulation		Test voltage (ACV/min)	Insulation resistance (MΩ·km)	Standard length (m)
		Configuration (main/mmø)	Outer Diameter (mmø)	Thickness (mm)	Outer Diameter (mmø)			
#26	0.14	7/0.16	0.49	0.25	0.99	1500	100	500
#24	0.22	7/0.21	0.64	0.25	1.14	1500	100	500
#22	0.3	12/0.18	0.72	0.25	1.22	1500	100	300
#20	0.5	20/0.18	0.93	0.25	1.43	1500	100	300
#18	0.75	30/0.18	1.14	0.28	1.70	1500	100	200
#16	1.25	50/0.18	1.47	0.3	2.07	1500	100	200
#14	2	37/0.26	1.83	0.3	2.43	2000	100	200
#12	3.5	43/0.32	2.42	0.35	3.12	2000	100	100
#10	5.5	35/0.45	3.07	0.4	3.87	2000	100	100
#8	8	50/0.45	3.67	0.45	4.57	2000	100	100
#6	14	91/0.45	4.89	0.5	5.89	2000	100	100

* Heat-resistant wire products can be changed according to order specifications, such as cross-sectional area / conductor type / insulation material / color / rated voltage / standard length.

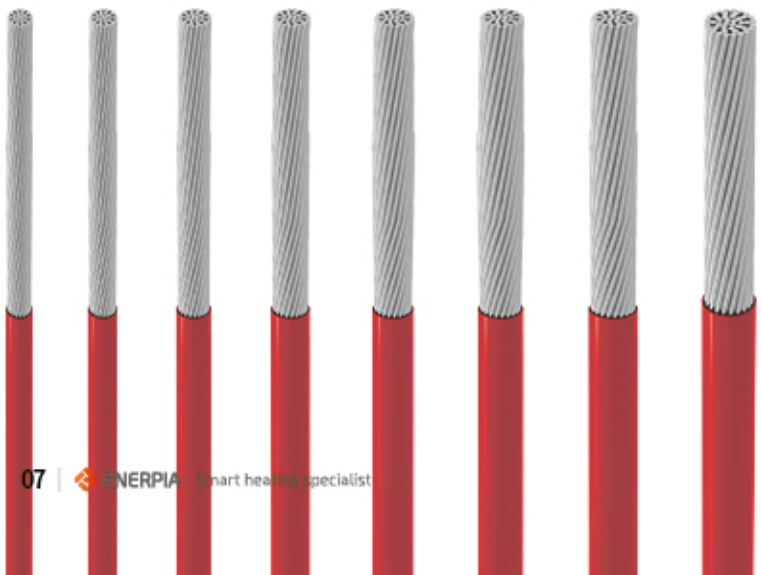
* The highlighted products are only available by customized order.

Specifications of Silicon wire

AWG standard	Cross-sectional area (㎟)	Conductor		Insulation		Test voltage (ACV/min)	Insulation resistance (MΩ·km)	Standard length (m)
		Configuration (main/mmø)	Outer Diameter (mmø)	Thickness (mm)	Outer Diameter (mmø)			
#24	0.22	7/0.21	0.64	0.4	1.41	1500	200	300
#22	0.3	12/0.18	0.72	0.4	1.52	1500	200	300
#20	0.5	20/0.18	0.93	0.4	1.73	1500	200	300
#18	0.75	30/0.18	1.14	0.4	1.94	1500	200	200
#16	1.25	50/0.18	1.47	0.6	2.27	1500	100	200
#14	2	37/0.26	1.83	0.6	3.03	2000	100	200
#12	3.5	43/0.32	2.42	0.8	4.02	2000	100	100
#10	5.5	35/0.45	3.05	1.0	5.05	2000	100	100
#8	8	50/0.45	3.66	1.0	5.66	2000	100	100
#6	14	91/0.45	4.89	1.2	7.29	2000	100	100

* Heat-resistant wire products can be changed according to order specifications, such as cross-sectional area / conductor type / insulation material / color / rated voltage / standard length.

* The highlighted products are only available by customized order.



HEAT RESISTANT WIRE

A company you can trust! Enerpia

Certificates of Enerpia

Certificate Of Patent (No. 10-1746775)

Letter of Q-Mark designation

Russia GOST Standard

CU (Russia compulsory certification)

CE

G-PASS certificate

Quality management system certificate

Environmental management system certificate

Certificate of the company-affiliated research institute

Letter of designating as a promising export SME

Letter of pre-star company designation

Membership card of the Korea International Trade Association

Design registration certificate

Design Registration/ Inno-Biz

Certificate of the company specialized in material parts

Venture company certificate

Enerpia is creating a safe space.

Smart heating specialist

Enerpia heat resistant wire is a product suitable for use
in a variety of applications due to its best-in-class quality and excellent safety standard.

Installation recommended in various places.

Enerpia heat-resistant wires are suitable for various fields such as internal wiring for a variety of mobile bodies, internal wiring for heating and home appliances devices, and visual display information and communication devices such as computers and CCTVs.

Drones, RC cars

Aircraft, ships

Lighting, home appliances, etc.

Cars, camping cars

Enerpia is a global company that has **successfully entered markets in 28 countries.**

Enerpia is a global company that has successfully entered markets in 28 countries including Russia and Europe.
Enerpia established local factories in China, Uzbekistan, Kyrgyzstan, Russia.

Smart heating specialist

ENERPIA
HEATING SYSTEM

A new revolution! An eco-friendly heating system

A company completed with its extensive experience and patented technologies

Enerpia puts customers and the environment first

Smart heating specialist

ENERPIA
HEATING SYSTEM

The only company in the industry that both manufactures and constructs the product

Enerpia provides convenience to our customers with our total solution - from design to repairs after construction completion.

ENERPIA
Smart heating specialist

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