



WOER

STOCK NO.: 002130

WOER ELECTRICAL

Insulation and Sealing Protection Series Products



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WOER GROUP



WOER ELECTRIC





Company Profile

PEOPLE. PRODUCT. POWER.

Shenzhen WOER Electric Technology Co., Ltd. is a subsidiary of Shenzhen WOER Heat-ShrinkableMaterial Co., Ltd..Main Products include: 110-500kV cable accessories products, 1-35kV low and medium voltage cold shrink, heat shrink and premoulding cable accessories, nuclear power cable accessories, rail transit cable accessories, high-speed railway cable accessories, telecommunication cable accessories, separable cable accessories, epoxy insulation products, busbar protection sleeves, insulation protection products, etc.

Products are widely used in power generation, power distribution, complete sets of equipments, and railway, mining, smelting, petrochemical, high-speed railway, ships, aerospace space and other fields. Shenzhen Woer Electric Technology Co., Ltd. is committed to building a globally recognized brand of cable connection and provider of best solutions, guarding global energy security.



Marketing Network

Woer have set up sales branches in over 40 cities in China, and the products have been sold to over 70 overseas markets, including America, Europe and Southeast Asia. The stable quality and reliable performance of our products have brought widely publicity to our brand.



Product Certification

Woer owns the independent intellectual properties of all products, and also has gained multiple international and domestic invention patents. Our products have passed a number of certifications, including ISO9001, ISO14001, OSO/TS16949 international quality certification, UL certification, CSA certification, KEMA certification, CRCC certification, SGS environmental test and 3C certification.





Insulation and Sealing Protection Series Products are independently developed by Woer. With excellent insulation, water proofing, insulation and sealing features , the products are widely applied into electrical protection, maintaining and urgent repairing. Industries related to the products range from electricity generation, power distribution, equipment kits, rail transportation, metallurgical mines, petrochemical industry, high-speed train, ships, space aerospace, telecommunication to wind power.

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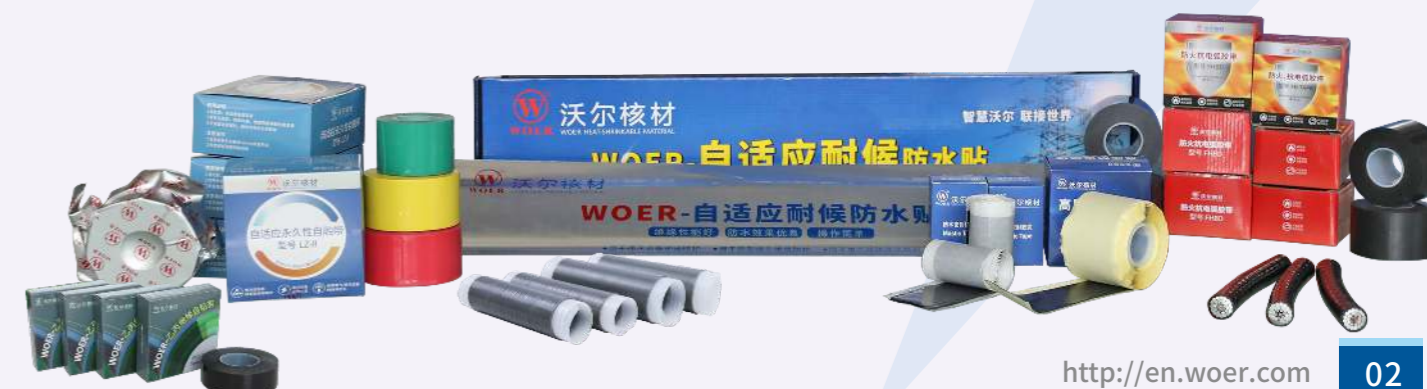
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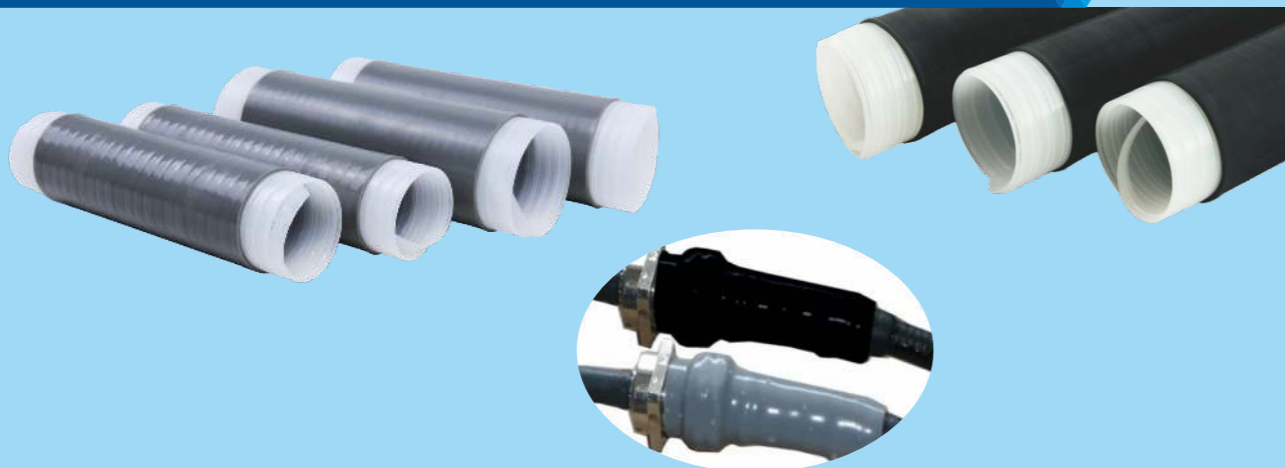
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Our Partner



WOER Weather-proof Solutions in Wireless Telecom. Station







Background

Moisture and water is the enemy of coax and the whole communication system. They can intrude into coaxial cable through connectors and cause damage. They can attenuate the high frequency RF signal, resulting in a service outage. In telecommunication field, even a short service interruption can result in a large loss.

Application



Current solutions and comparisons

Solutions	Tapes or mastics	Gel closure	Heat shrink tube	Cold shrink tube
Comparisons				
Weather proof	Good	Better	Better	Excellent
Room	Common	Large	Small	Small
Labor cost	High	Low	Low	Low
Tools	No	No	Heat gun	No
Maintainance	Difficult to remove	Convenient	Difficult to remove	Convenient

Description

Woer cold shrink tubes made of silicone rubber are a series of open ends, tubular rubber sleeves, which are manufactory expanded and assembled onto a removable supporting plastic core.



Features

- Simple installation;
- No tools or heating required;
- Tightly sealing, resilience retainability even after years of aging and exposure;
- Waterproof which can meet requirements of Ip67;
- Convenient installation for limited site.

Advantages

- Time saving so that it can save the most labor cost
Less than 1 minute
- Meet the design requirement of compact RRU;
Less than 10mm between the two connector central lines
- Just cut for routine check;
Less than 5 seconds

How to use



Cold Shrink Silicone Tube

Technical data

No.	Property	Typical value	Test method
1	Tensile strength	≥7.5MPa	GB/T528
2	Tear strength	30kN/m	GB/T529
3	Elongation	700%	GB/T528
4	Volume resistivity	1.0*10 ¹⁵ Ω·cm	GB/T1410



Selection table(grey series)

Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)
625-L	Φ25	6.3~21/0.25~0.59	90~180/3.5~7
632-L	Φ32	10~26/0.39~1.02	90~180/3.5~7
635-L	Φ35	12~30/0.47~1.18	90~180/3.5~7
640-L	Φ40	12.7~33/0.50~1.30	90~450/3.5~17.7
644-L	Φ44	12.7~38/0.50~1.50	90~450/3.5~17.7
653-L	Φ53	22~46/0.87~1.81	90~500/3.5~19.7
665-L	Φ65	32~58/1.26~2.28	90~500/3.5~19.7
680-L	Φ80	37~72/1.46~28.3	90~500/3.5~19.7

Selection table(black series)

Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)
825-L	Φ25	7.3~21/0.29~0.83	81.3~203/3.2~8
835-L	Φ35	10.5~30/0.42~1.18	178~305/7~12
840-L	Φ40	11.9~34/0.47~1.34	140~305/5.5~12
845-L	Φ45	13.5~39/0.53~.54	152~305/6~12
853-L	Φ53	18.2~45/0.72~1.77	152~457/6~18
870-L	Φ70	22.4~63/0.88~2.48	125~508/5~20

Cold Shrink EPDM Tube

Technical data

No.	Property	Typical value	Test method
1	Tensile strength	≥7.5MPa	GB/T528
2	Tear strength	30kN/m	GB/T529
3	Elongation	700%	GB/T528
4	Volume resistivity	1.0*10 ¹⁵ Ω·cm	GB/T1410



Selection table(general)

Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)
8320-6	Φ20	8~15/0.30~0.59	50~600/1.97~23.6
8325-L	Φ25	10~20/0.39~0.79	50~600/1.97~23.6
8335-L	Φ35	14~30/0.55~1.18	50~600/1.97~23.6
8340-L	Φ40	17.5~33/0.69~1.30	50~600/1.97~23.6
8353-L	Φ53	25~46/0.98~1.81	50~600/1.97~23.6
8370-L	Φ70	32~63/1.26~2.48	50~600/1.97~23.6
8104-9	Φ104	43~94/1.69~3.70	50~600/1.97~23.6
8125-9	Φ125	46~114/1.81~4.49	50~600/1.97~23.6
8150-18	Φ150	55~135/2.17~5.31	50~600/1.97~23.6

Selection table(high shrinkage ratio)

Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)
8435-L	Φ35	12.5~30/0.49~1.18	500~600/1.97~23.6
8440-L	Φ40	14~33/0.55~1.30	500~600/1.97~23.6
8453-L	Φ53	19~46/0.75~1.81	500~600/1.97~23.6
8460-10	Φ60	20.5~51/0.81~2.01	500~600/1.97~23.6
8470-L	Φ70	25~63/0.98~2.48	500~600/1.97~23.6
8480-13	Φ80	27.4~70/1.08~2.75	500~600/1.97~23.6

Cold Shrink Silicone Rubber Tube with Mastic

Description
Pre-applied sealing mastic with excellent sealing effect. No need of wrapping sealing mastic tape or sealing mastic to make the installation more simply and quickly.



Selection table

Part No.	Size	Application Range(mm/inch)	Length after Relaxed(mm/inch)
728-L	Φ28	9~23/0.36~0.90	100~120/3.94~4.72
732-100	Φ32	9~26/0.36~1.02	100/3.94
744-135	Φ44	12.7~38/0.5~1.49	135/5.31

Cold Shrink Silicone Rubber Tube with Padding

Description
Woer cold shrink tubes with padding are a series of open ends, tubular rubber sleeves, which are manufactory expanded and assembled onto a removable supporting plastic core. Meanwhile, the new design adopts a padding structure in one end for better tear strength.



Selection table

Part No.	Size	Application Range(mm/inch)	Length after Relaxed(mm/inch)
640-L	Φ40	12.7~33/0.50~1.30	90~450/3.5~17.7

Embossing Cold Shrink Silicone Rubber Tube

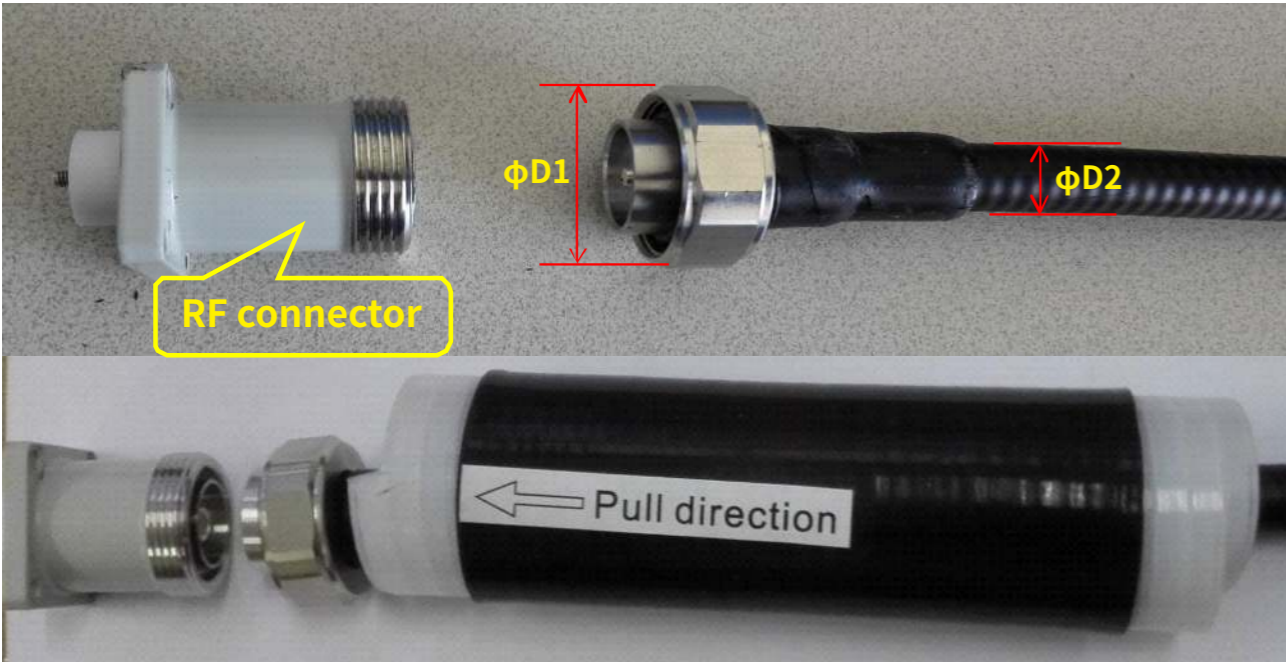
Description
Woer embossing cold shrink tubes are a series of open ends sleeves, tubular rubber sleeves, which are manufactory expanded and assembled onto a removable supporting plastic core. Meanwhile, the new design adopts a corrugated structure to provide better protection against impact and friction.



Selection table

Part No.	Size	Application Range(mm/inch)	Length after Relaxed(mm/inch)
640-L	Φ40	12.7~33/0.50~1.30	90~450/3.5~17.7

Dimensions required



Typical specifications recommended

Woer Part No.	Application Range/mm	Length for seal (L)/mm	Connector OD(D1)/mm	Cable OD(D2)/mm
644-135	12.7~38	135	Type N (34/37)	22.2
632-110	10~26	110	Type N (24)	12.7
640-135	12.7~33	135	DIN-7/16 (32)	12.7
653-135	22~46	135	DIN-7/16 (40)	22

Ordering information:

1. The min. shrunk I.D shall be smaller than O.D of the feeder/cable, meanwhile the max. I.D shall be larger than O.D of the connector.
2. Please indicate the specification and quantity that you'd like to order.
3. Please contact us if special requirement is needed.

Test Report



Woer is committed to delivering you a simple and convenient solution for telecommunication system protection.



Just fill the followed table

	Length for seal (L)	Connector OD(D1)	Cable OD(D2)
Dimension(mm)			

Feel free to contact us for more details.

WOER WOER Self-adaptive Weathering Resistance&Water Proofing Tape



I Product Introduction

WOER self-adaptive weathering resistance&water proofing tape is an independently developed tape for waterproofing and insulation. It has excellent insulation and water proofing features, which facilitate widely application on cable, optical cable, overhead line and exposed metal conductor insulation and protection up to 35kV. It is used to enhance electrical products' insulation and avoid electrical incidents caused by aged electrical products, to eventually improve insulation in power distribution network.

Simply wrap the tape over the area to be protected, and the tape will be cured and forms a layer of excellent insulation and waterproofing after exposed to air. Simple operation makes it easy for quick repair jobs without special tools.

It is available to tailor or reshape the tapes as required on site.

II Product Features

- Cured when exposed to air;
- Easy to install without special tools especially high above the ground;
- Good high and low temperature resistance provide convenience for operation under all weather.
- Good UV resistance and reliable adhesion;
- Quick self-fusing upon stretching and excellent water proofing;
- Refine and even composition makes better insulation performance

III Product size

Product dimension I : 600mm×90mm×1.8mm
Product dimension II : 1000mm×90mm×1.8mm
Product dimension III : 170mm×120mm×1.8mm

Remark: Customization is available for request.

IV Technical Parameters

NO.	Item(Before cured)	Typical value
1	Use in__ after unpack	30min
2	Fully cured	7d
3	Product packed in	tape
4	Color	red, yellow, green, black
5	Item (After cured)	
6	Hardness Shores A	49
7	Tensile strength MPa	1.75
8	Elongation at break %	370
9	Dielectric strength /kV(2mm)	36.17
10	Volume resistivity Ω·cm	1.41×10^{15}
11	Dielectric constant	3.08
12	Dielectric loss	0.0014
13	Flame retardant grade	V1
14	Water proof and voltage withstanding test(20kV,4 h)	Pass

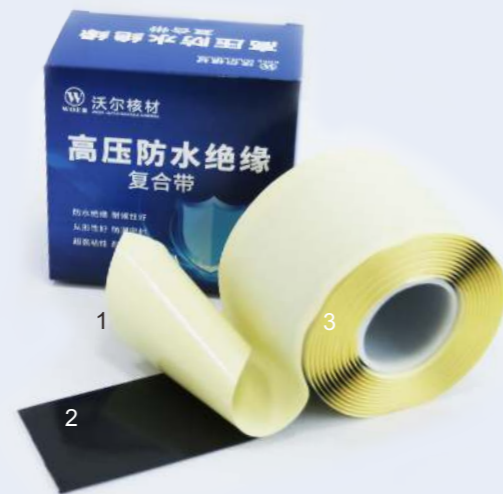
V Application

- Waterproof and sealing for overhead lines; Enhance safe clearance for better insulation;
- Insulation and protection of exposed power cable conductors;
- Partial insulation repair for overhead line and cable termination;
- Switchgear inlet sealing, especially for outdoor application;
- Waterproofing of antennas, feeders, splitters, towers and other facilities in the construction of 4G and 5G base stations;
- Other power and water proofing related application, such as high speed railway and boats.

Substation Insulation Applications



WOER Water Proofing and Insulation Composite Tape



1	Release papers
2	Baseband & Adhesive Waterproof Clay
3	Support tube

I Product Introduction

Water proofing Tape is a kind of waterproof, sealing and insulating composite mastics with strong adhesion and shape variable. It is composed of ethylene-propylene rubber and butyl rubber. It has great self-adhesiveness, and excellent water proofing and insulation function.

Easy to install, non-corrosive to copper, aluminum and cable sheathing materials.

Rated service temperature is 90°C, short time overload temperature over 130°C, which can be used for insulation, waterproof, sealing and protection at power cable accessories, communication base stations, and communication cable connectors.

II Product Features

- Excellent adhesive and waterproof function, easy to install;
- Excellent weather resistance and sealing function;
- Superior low and high temperature stability, cater for installation under various climate;
- Sound abrasion resistance and tensile elongation performance;

III Product size

Product dimension : 3000mm×50mm×1.65mm black

Remark: Customization is available for request.

IV Technical Parameters

NO.	Item	Typical value
1	Tensile strength MPa	1.56
2	Elongation at break %	1003
3	Dielectric strength kV/mm	19.7
4	Dielectric constant	2.3
5	Dielectric loss factor	0.0021

IV Technical Parameters

NO.	Item		Typical value
6	180°C peel strength(25°C to steel plate)		114
7	Water absorbability %		0.11
8	Ozone resistance(50pphm,40°C, 70h)		No crack, degumming, no edge warping, curling or no fall-off
9	Light-proof ageing		No crack, degumming, no edge warping, curling or no fall-off
10	Cold resistance (0°C×2h)	150% elongation force Max N	28.8
11		Elongation at break %	≥400
12		Appearance	No crack
13	Cold resistance (-20°Cx2h, elongation,%)		≥400
14	Thermal stress resistance (130°Cx1h)		No crack
15	Thermal ageing(80°Cx168h)		No crack, degumming, no edge warping, curling or no fall-off

V Application

- Used for waterproof and sealing of power cable accessories, such as cold shrink cable joints, waterproof joints, weld joints etc.;
- Used for waterproofing of antennas, feeders, splitters, towers and other facilities in the construction of 4G and 5G base stations;
- Used for low-voltage insulation and outer sheath repair, suitable for primary insulation recovery and insulation of motor leads of 1kV and below voltage;
- Waterproof and sealing for the ground wire;
- Waterproof and sealing protection of overhead line joints;
- Used in other fields related to power and waterproofing, such as high-speed rail, ships, etc.

Electrical Power Applications Communication Systems Applications



WOER Water Proofing Mastic Tape



I Product Introduction

Waterproof sealing mastic tape is a kind of tape with good shape variable and durability. It can be used in conjunction with vinyl tape to provide excellent water proofing and sealing effect for cables and pipeline.

It is mainly composed of butyl rubber, which demonstrates excellent self-fusing, water proofing and insulation properties. It can provide quick and easy repair and sealing for targets that require waterproofing.

It can be used for insulation, waterproof, sealing and protection in communication base stations, communication cable connectors, etc., and the rated service temperature is -40 to 80°C.

II Product Features

- Excellent material bonding and water proofing performance, easy to install;
- Ultralow water absorbability;
- Low failure rate and maintenance cost;
- High tensile strength, excellent covering;
- Quality material, with excellent insulation function;
- Suitable for insulation filling and sealing of complex structures, with strong adhesion;
- This product can completely isolate the influence of ozone, water and various soil chemical substances;
- Especially suitable for cold weather, it can maintain elasticity and good sealing even when in large curvature.

III Product size

Product dimension : 600mm×63.6mm×3.2mm

Remark: Customization is available for request.

IV Technical Parameters

NO.	Item	Typical value
1	Color	Black
2	Tensile strength(room temperature) MPa	0.5
3	Elongation at break%	>1500
4	Water proof grade	IPX 8
5	Dielectric strength kV/mm	20
6	Heat stress resistance(130°Cx1h)	No crack
7	Volume resistivity Ω.cm	1×10^{14}
8	Ozone resistance	No craze on surface
9	Water absorbability	0.032
10	Ultra violet	No visible change

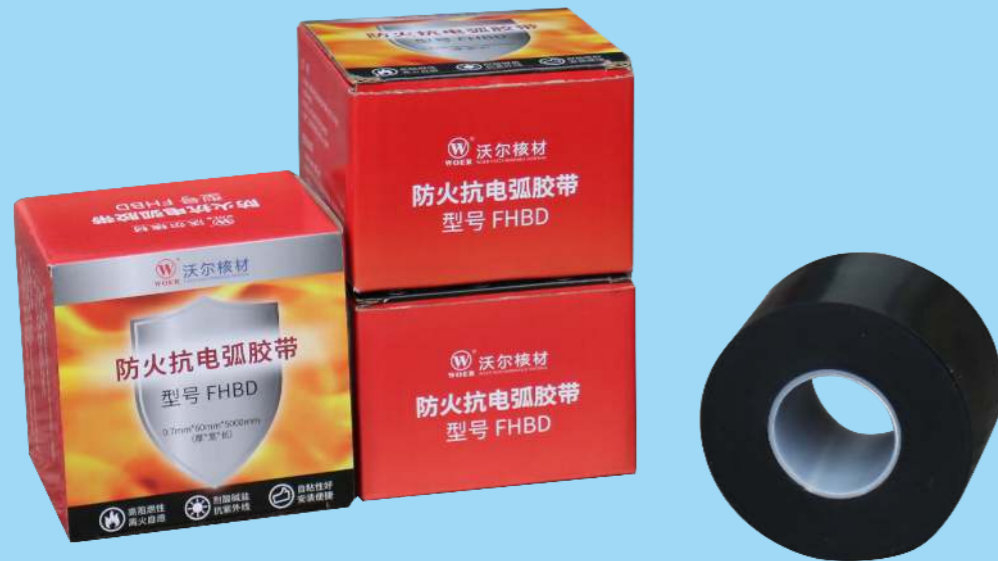
V Application

- Proofing and sealing of power cable accessories, such as cold shrink cable joints, waterproof joints, weld joints etc.;
 - Waterproofing of antennas, feeders, splitters, towers and other facilities in the construction of 4G and 5G base stations;
 - Low-voltage insulation and oversheath repair, suitable for primary insulation recovery and insulation of motor leads of 1kV and below voltage;
 - Water proofing and sealing for the ground wire;
 - Water proofing and sealing protection of overhead line joints;
- Used in other fields related to power and water proofing, such as high-speed rail, ships, etc.

Communication Systems Applications



WOER Flame Retardant and Arc Proofing Self-fusing Tape



I Product Introduction

Flame retardant and arc proofing tape is a self-fusing tape with fireproof, heat insulation and arc resistance, specially used for fireproofing of cables.

Flame retardant and arc proofing tape will expand rapidly when exposed to fire, and a thick carbon compound will be created between the fire source and the cable or cable joint, to eventually maintain heat insulation and fire prevention. Moreover, this tape has excellent arc resistance.

In the event of arc caused by damaged cable insulation, followed by fire, it can act as a barrier.

II Product Features

- High oxygen index and excellent flame retardant performance , provide a fire barrier and good insulation for cables;
- High tensile strength, excellent covering;
- Quality material, with excellent insulation;
- The product demonstrates fairly good flexibility and formability, suitable for fire protection of complex structures;
- Demonstrate excellent water proofing, acid-alkali and ultraviolet resistance.

III Product size

Product dimension : 5000mm×60mm×0.7mm

Remark: Customization is available for request.

IV Technical Parameters

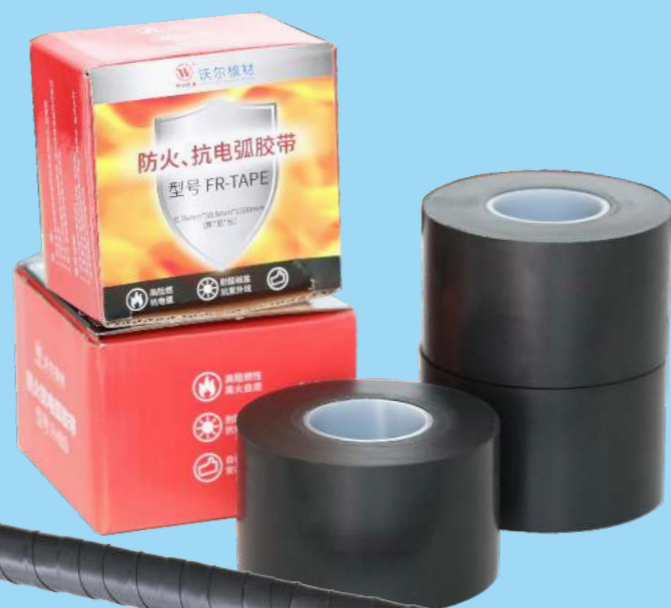
NO.	Item	Typical value
Before ageing		
1	Tensile strength(room temperature) MPa	6.1
2	Elongation at break(room temperature)%	630
After ageing(: 100°C±2°C/168h)		
3	Tensile strength variation max %	6.6
4	Elongation at break variation max %	14
5	Elongation at break(-15°C±2°C)%	163
6	Water resistance	No blister, wrinkle ,lamination or craze
7	Acid resistance	No blister, wrinkle ,lamination or craze
8	Alkali resistance	No blister, wrinkle ,lamination or craze
9	Saline resistance	No blister, wrinkle ,lamination or craze
10	Self fusing	No fall-off
11	Oxygen index %	50.6
12	Carbonization height	0.58
13	Electrical strength kV/mm	25.31
14	Flame retardant grade	FV-0

V Application

- Cable joints and termination fire proofing;
- Switchgear inlet and outlet fire proofing;
- Cable channel ;
- Fire hazard.



WOER Flame Retardant and Arc Proofing Tape



I Product Introduction

Flame retardant and arc proofing tape is a non-adhesive tape with fireproof, heat insulation and arc resistance, specially used for fireproofing of cables.

Flame retardant and arc proofing tape will expand rapidly when exposed to fire, and a thick carbon compound will be created between the fire source and the cable or cable joint, to eventually maintain heat insulation and fire prevention. Moreover, this tape has excellent arc resistance.

In the event of arc caused by damaged cable insulation, followed by fire, it can act as a barrier.

II Product Features

- The product is light and thin, is conducive to the heat dissipation of the cable, and is easy to install;
- High tensile strength, excellent covering;
- Quality material, with excellent insulation;
- The product demonstrates fairly good flexibility and formability, suitable for fire protection of complex structures;
- Recycle use;
- Excellent arc resistance, which protects adjacent wrapped cables and accessories when the cable suffers from a fault arc.

III Product size

Product dimension : 6000mm×50mm×0.76mm black

Remark: Customization is available for request.

IV Technical Parameters

NO.	Item	Typical value
1	Color	black
2	Hardness A	90
3	Tensile strength(room temperature) MPa	17.7
4	Elongation at break(room temperature)%	210
5	Elongation at break(-12℃)%	25.3
6	Tensile strength(-12℃) MPa	120
7	Tensile strength(-18℃) MPa	23.5
8	Elongation at break(-18℃) %	83
9	Dielectric strength kV/mm	23
10	Flame retardant grade	V0
11	Oxygen index	32.9

V Application

■ For fire prevention of cables

The product is used on the cables on one or both sides of the cable penetration hole sealing layer, and also on the cables on both sides of the fire barrier or firewall or other similar places.

■ Fire prevention of cable joints

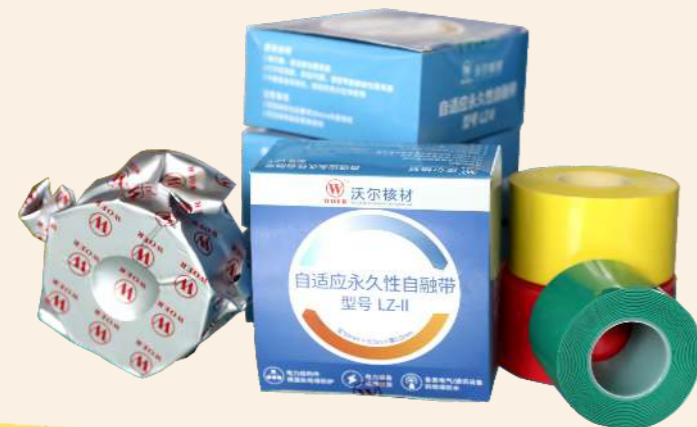
Set fire resistance section for adjacent cables and joints.

■ Fire prevention of cable terminations

Wrap fireproof and anti-arc tape under the cable termination for at least 2m.



WOER WOER Self-adaptive Permanent Self-fusing Tape



I Product Introduction

WOER Self-adaptive Permanent Self-fusing Tape is an independently developed wrapping tape of insulation and protection. It combines both characters of traditional cross-linked self-fusing tape and self-curing products, which enables second chemically cross-linking upon tape wrapping. It has excellent insulation and water proofing features, which facilitate widely application on cable, optical cable, overhead line and exposed metal conductor insulation and protection up to 35kV.

Simply wrap the tape over the area to be protected by 50% lapping evenly, and the tape will be cured and forms a layer of excellent insulation and waterproofing after exposed to air. Simple operation makes it easy for quick repair jobs without special tools.

II Product Features

- Cured when exposed to air;
- Easy to install without special tools especially high above the ground;
- Good UV resistance and reliable adhesion;
- Permanent phase marking under outdoor application;
- Quick self-fusing upon stretching and excellent water proofing;
- Stable electrical performance under overloading service;
- Stable low and high temperature resistance, from -60°C-200°C;
- Good flame retardant performance, which ensure good fire insulation;
- Long service life. No fall-off up to 10 years.

III Product size

Product dimension I : 0.8mm*50mm*5000mm (red/yellow/green)
Product dimension II : 0.8mm*100mm*5000mm (red/yellow/green)

Remark: Customization is available for request.

IV Technical Parameters

NO.	Item	Typical value	
1	Use in__ after unpack	1h	
2	Fully cured	7d	
3	Product packed in	tape	
4	Warranty period	1 year	
5	Typical value	Before cured	After cured
6	Hardness Shores A	8	49
7	Tensile strength MPa	0.90	4.47
8	Elongation at break %	1120	500
9	Dielectric strength kV/mm	33.62	41.66
10	Volume resistivity	1.4×10^{12}	3×10^{16}
11	Dielectric constant	4.70	2.79
12	Dielectric loss	0.05	0.0006
13	Self bonding	Pass	\
14	Thermal stress resistance	Pass	\
15	Flame retardant grade	\	V0
16	Water proof test(IPX8)	\	Pass
17	Water proof and voltage withstanding test(20kV,4 h)	\	Pass

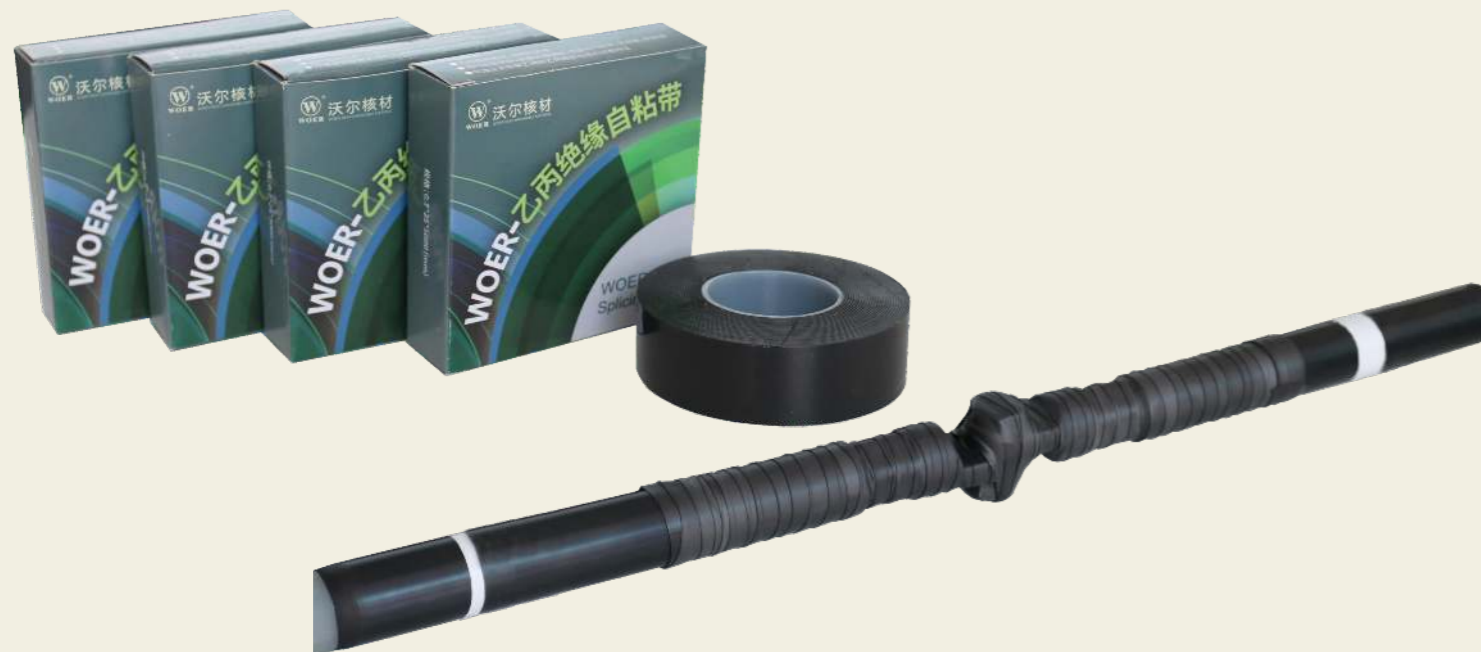
V Application

- Waterproof and sealing for overhead lines; Enhance safe clearance for better insulation;
- Insulation and protection of exposed power cable conductors;
- Partial insulation repair for overhead line and cable termination;
- HV substation insulation and protection: busbars, soft connection and electric reactor;
- Other power and water proofing related application, such as high speed railway and boats.
- Other insulation and protection applied in 380V-330kV, such as HV power transmission and distribution, busbar bridge.

Substation Insulation Applications



WOER EPR Self-fusing Insulation Tape



I Product Introduction

WOER EPR self-fusing insulation tape is made of ethylene propylene rubber, which demonstrates good formability and stable insulation performance. No vulcanization is required. It is applicable to voltage rating up to 35kV, of which XLPE cables service temperature at 90°C and overload temperature at 130°C. It can be also applied in non severe or polluted outdoor environments.

II Product Features

- Made of ethylene propylene rubber, which is self-fusing tape;
- Excellent electric performance, good resistance to ultraviolet radiation, electric corona, high temperature and weathering;
- Suitable for XLPE and EPR cable overloading conditions;
- Superior dielectric strength and low dielectric loss. Applicable to HV cable insulation protect cables from overloading conditions;
- Excellent tensile strength and elongation rate, which makes good tensile performance without fall-off.

III Product size

Product dimension I : 5000mm×25mm×0.76mm
Product dimension II : 9000mm×19mm×0.76mm

Remark: Customization is available for request.

IV Technical Parameters

NO.	Item	Typical Value
1	Tensile strength MPa	3.88
2	Elongation at break(room temperature)%	1190
3	Dielectric strength kV/mm	37.12
4	Dielectric constant	2.717
5	Dielectric loss	0.0017
6	Volume resistivity Ω.cm	1.03×10^{16}
7	Self-fusing(23°C, 24h)	0.032
8	Thermal stress(130°C, 1h)	No crack

V Application

- For primary insulation rebuilding of cables with solid insulation up to 35kV;
- Damp-proofing and sealing of HV and LV cable joints or terminations;
- HV and LV cable core connector sealing and insulation;
- Busbar insulation.

