

WOER Smart Temperature-indicating Insulation Tape

Product Introduction

WOER smart temperature-indicating insulation tape is an independently developed color-changed product, including reversible type and nonreversible type. It can function as color-changed tape and insulation tape, providing insulation protection and temperature monitoring indication at key parts of electric power lines, cable terminations, transformers, overhead lines, etc.

The tape features sensitive temperature monitoring and excellent insulation property. It smartly monitors temperature, gives warnings and helps to find overheat fault points for timely maintenance. Therefore, it can be an alternative to chameleon paint, chameleon wax and chameleon pasters.

It is not only widely used in power cables, optical cables, overhead lines and bare conductors with rated voltage up to 35kV to provide insulation protection, but also in communications industry, providing waterproofing for such equipment as outdoor base station joints, special-shaped antennas, splitters.



Product Features

- Smart temperature monitoring and warning for power supply system.
- Distinct color changing at 60-80°C.
- Insulation repair for electrical equipment.
- Insulation protection for joint areas of electric structural parts.
- Insulation protection and waterproofing for different electrical and communication equipment.
- Rapid air curing property allows minimal training, tool free installation and convenient working at height.

Application

- Acts as temperature warnings in conditions of overload, poor contact, and high ambient temperature at screw joints of power cables, cable terminations, transformers and other electric conductors.
- Easy sealing and insulation protection for cable clamps, and local insulation reinforcement for overhead lines with inadequate safe clearance.
- Safe insulation protection for bare parts of metallic conductors.
- Provides local insulation repair for overhead lines and cable termination accessories.
- Suitable for bare parts of switchgear outgoing lines and main bus bars, bus-bar overlapping areas of distribution devices, transformer bus bars and lugs inside switchgears and bus bars of high-voltage switchgears for electrical insulating and protection purposes.

Product Specification

No.	Detail Information		
1	Size (customizable)		0.8mm*25mm*5000mm (T*W*L) 0.8mm*50mm*5000mm (T*W*L)
2	Type	Reversible (REV)	Original color (red, yellow or green) begins to turn white at 60-70°C
		Nonreversible (NR)	Red color begins to turn white at 80°C
3	Time of color change		Reversible type resumes within 3min when bringing to room temperature

Note: T=thickness, W=width, L=length.

Product Properties

No.	Properties before curing	
1	Hardness/A	≤25
2	Tensile strength/MPa	≥2
3	Elongation at break/%	≥700
4	Self-adhesive property	Pass
5	Heat-resistant stress and cracking	Pass
Properties after curing		
7	Hardness/A	35
8	Tensile strength/MPa	≥4
9	Elongation at break/%	≥500.00
10	Electric breakdown strength/(kV/mm)	≥25
11	Volume resistivity/Ω · cm	≥3×10 ¹⁵
12	Dielectric constant	2.79
13	Dielectric loss	0.0006
14	Waterproof test (IPX8)	Pass

Operating Procedure

- Clean areas to be wrapped by the tape before operating.
- Cut the package from any sides and take out the insulation tape.
- Uncover the isolating membrane and wrap the tape from joint areas towards lines or bus bars and from bottom to top according to actual need.
- The tape makes no distinction between obverse side and reverse side. Smoothly unfold the tape and avoid wrinkles and overlapping when operating.
- Appropriately stretch the tape by 100-200% and wrap the objects in succession, with fully overlapping for the first loop and then continually half-overlapping, ensuring at least 2 layers of overlapping.
- Press the end onto the tape body for 2-3s to reach seamless adhesion. The end of the wrapping area shall be a smooth flat surface or a smooth arc surface.