

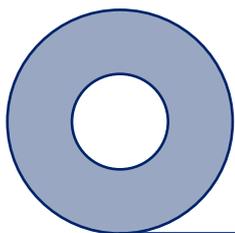
Product: **51**

Product group: **Anti-Corrosion Materials**

General description

51 vinyl tape is designed for the corrosion protection of buried objects. The vinyl chloride backing has excellent electrical insulation properties and chemical resistance. The backing together with the synthetic rubber-based adhesive provides superior durability and anticorrosion property. The tape remains highly flexible and easy workable in various climates.

Construction



- Synthetic rubber-based adhesive
- Vinyl chloride based backing

Characteristics

The synthetic rubber-based adhesive layer forms a perfect air and moisture tight seal around pipes. Maximum corrosion protection is guaranteed if 51 vinyl tape is used in conjunction with one of the following layers:

- primer as undercoat
- Nitto 12FB for contoured surfaces
- Nitto 57 GO/c for irregular shapes

The product can be applied on all kinds of surfaces: steel, galvanised steel, stainless steel, copper, glass, plastic, rubber, etc.

Application

51 vinyl tape, in combination with Nitto 57GO/c, is commonly used as a component of the Nitto Tele-Cold-Seal joint-closure system for telecommunication cables.

For the protection of pipe-work against corrosion, including joints and elbows under severe environmental conditions, above ground and below (eg. mines, chemical plants). It is widely used in combination with a primer or Nitto 12FB.

Application temperature: -25 °C to +70 °C

Service temperature: -45 °C to +70 °C

Features

- high performance vinyl tape
- perfect air and moisture tight seal
- maximum corrosion protection
- can be applied on all kinds of surfaces
- high impact resistance
- weather resistant

Properties

	Typical Value	Test Method
Thickness backing / adhesive	0.27 mm / 0.13 mm	
Adhesive strength to stainless steel	8.0 N/25mm	JIS Z 0237 (2009)
Adhesive strength to backing	7.0 N/25mm	JIS Z 0237 (2009)
Tensile strength	120 N/25mm	JIS Z 1901
Elongation	250 %	JIS Z 1901
Heat & Cold resistance	Good	JIS Z 1901
Insulation resistance	10 ⁵ MOhm	JIS Z 1901 / JIS K8150 / JIS C 1301
Volume resistivity	10 ¹³ Ohm.cm	JIS K 6911
Dielectric breakdown voltage	13 kV	JIS C 2110
Vapour transmission	2 g/m ² / 24h	ASTM E 96
Change of PH	+/- 1.0	JIS Z 1901

Chemical resistance

The tests were conducted after 1000 h immersion in each solution.

Chemical contents	Tensile Strength	Elongation (%)	Volume Resistivity
Before immersion	120 N/25mm	260	5x10 ¹³
10% NaCL	130 N/25mm	220	4x10 ¹³
10% NaOH	130 N/25mm	230	3x10 ¹³
10% H2SO4	110 N/25mm	210	4x10 ¹³

Watertightness

A tape-wrapped (50mmφ) steel pipe is immersed in 3% saline solution and the insulation resistance evolution was measured in time. (50% tape-overlap)

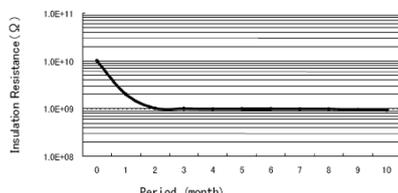


Fig-2, Change of Watertightness with Days

Warranty

The product is guaranteed to be free from defect in material and workmanship at the time of delivery and will be suitable for use for a period of 6 months thereafter, subject to the conditions set out herein.

Application guidelines

- Surface preparation:
 - remove rust, dirt, etc. by wirebrush or sandpaper.
 - remove dust, oil or grease by use of cleaning solvent and remove moisture with dry cloth.
- Apply a primer, Nitto 57 GO/c with 20 mm overlap or Nitto 12FB with 5 mm overlap.
- Wrap around the corrosion protective tape, 51 vinyl tape with 50% overlap.
- The tape should be stored in a dark and cool place.
- The tape is not suitable for application to the area exposed to the ambient temperature of 70 °C or above.
- Please do not contact with organic solvents.

If you require additional information on technical properties and application as well as product sampling or testing, please contact your local Nitto Europe sales office.

General conditions of use and precautions:

The properties of the product might be adversely affected by various elements such as composition, condition and surface of and impurities in or on the substrate, temperature and humidity during storage, the surrounding environment at and after application and time of exterior use. When the product is used in combination with another material or process, the user shall assure the compatibility of the product in such combination and whether this combination results in the expected performance. The same principle applies in the event of product use in extreme conditions or circumstances, whether at or after the moment of application, including extended exposure to sunlight or extreme temperatures and pressure.

Packaging, transport and storage:

During transport and storage the product should always be protected against direct sunlight and extremes in temperature and humidity and contained in its original packaging. Once removed from its packaging, it should be promptly applied and remain shielded from direct sunlight and extreme temperature as well as protected against dust and other impurities.

Liability:

Except for its wilful misconduct, Nitto Europe's liability shall be limited to a replacement, a reimbursement or an additional delivery of the product, and shall not exceed the purchase price of the products. In no event shall Nitto be liable in respect of any indirect or consequential damages, including loss of profits. The above limitations of liability shall equally apply if Nitto Europe has assisted in any manner with the selection, treatment or application of the product.

Product information:

This datasheet provides a general description of the product properties and application scope. Full technical details in connection with this product are presented in the customer product specification, which is available upon request.

The information reflected in this datasheet is subject to change and the product described herein may be modified or discontinued without notice.

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Nitto Europe NV has obtained following certificates:

- ISO 9001
 - ISO 14001
 - ISO/TS 16949
- Please check our website for applicable scope



For your local Nitto Europe sales office, please visit our web site:
www.nittoeurope.com

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