

Product: 15 Selffusing Insulation Tape

Productgroup: Cable Materials

# General description

Nitto 15 is a self-fusing, butyl rubber tape, widely used for the electrical insulation, protection, sealing, splicing and termination of 6 to 22 kV cables.

Nitto has eliminated the conventional need for a liner thereby reducing the time required to apply the tape. Nitto 15 is available in 2 thicknesses: 0.5 mm and 0.75 mm.

## Construction



### Characteristics

Nitto 15 has an excellent volume resistivity, a high breakdown voltage and a low dissipation factor. It is totally resistant to moisture, water and chemicals.

Nitto 15 offers excellent electrical insulation, workability and weather protection.

The product has a superior weatherability and ozone resistance and because of the linerless system a very short application time. It completely self-amalgamates in two hours.

## **Application**

Nitto 15 can be used for termination, splicing and corrosion protection of cables. Also insulation and protection of lead shielded cables is possible.

The product is used for its waterproof sealing and corrosion protection of cables in marine and off-shore environments.

Application temperature: min. –10 °C and max. 40 °C

Maximum service temperature: continuously 65 °C and short periods 100 °C Above 40 °C the tape begins to amalgamate to itself and can become difficult to unwind.

### **Features**

- excellent volume resistivity
- high breakdown voltage
- low dissipation factor
- total resistance to moisture, water and chemicals
- superior weatherability and ozone resistance
- excellent workability
- completely self-amalgamating
- excellent electrical insulation

## **Properties**

|                                   |                        | Test method             |
|-----------------------------------|------------------------|-------------------------|
| Thickness                         | 0.5 mm                 | ASTM D 1000             |
| Tensile strength 23 °C            | 3.2 N/mm²              | ASTM D 1373 (500mm/min) |
| Tensile strength 100 °C, 96 hrs   | 3.0 N/mm²              | ASTM D 1373             |
| 100% Modulus 23 °C                | 1.3 N/mm²              | ASTM D 1373             |
| 100% Modulus 100 °C, 96 hrs       | 1.3 N/mm²              | ASTM D 1373             |
| Elongation 23 °C                  | 550%                   | ASTM D 1373             |
| Elongation 100 °C, 96 hrs         | 570%                   | ASTM D 1373             |
| Brittle point                     | -60 °C                 |                         |
| Breakdown voltage                 | 44 kV/mm               |                         |
| Volume resistivity                | 1 x 10exp15 ohm.cm     | ASTM D 1373             |
| Dielectric dissipation factor     | 0.04%                  |                         |
| Dielectric constant               | 2.6                    | ASTM D 150              |
| Power factor (60 Hz)              | 0.05-0.08%             | ASTM D 1373             |
| Self-amalgamating property        |                        |                         |
| stretched 180%, 5 min             | Not yet amalgamated    | Nitto test method       |
| stretched 180%, 60 min            | Nearly amalgamated     |                         |
| stretched 180%, 24 hrs            | Completely amalgamated |                         |
| Ozone resistance (0.02%, 24 hrs)  | Good                   | ASTM D 470              |
| Crack test (30 min immersed in wa | Nitto test method      |                         |

<sup>\*</sup> Nitto 15 is also available in 0.75 mm thickness.

# Availability

| Thickness | Width* | Length | Rolls/carton | Rolls/layer | Rolls / pallet |
|-----------|--------|--------|--------------|-------------|----------------|
| 0.5 mm    | 19 mm  | 5 m    | 100          | 1200        | 4800           |
| 0.5 mm    | 19 mm  | 10 m   | 100          | 1000        | 4000           |
| 0.5 mm    | 25 mm  | 10 m   | 100          | 1000        | 3000           |
| 0.5 mm    | 25 mm  | 66 m   | 40           | 240         | 960            |
| 0.5 mm    | 38 mm  | 10 m   | 50           | 350         | 1050           |
| 0.5 mm    | 50 mm  | 10 m   | 50           | 350         | 1050           |
| 0.75 mm   | 19 mm  | 5 m    | 100          | 1000        | 2000           |
| 0.75 mm   | 38 mm  | 5 m    | 50           | 500         | 1000           |

<sup>\*</sup> Other sizes are available on request.

Our technical center is always at your disposal for special application requests.

Please contact us to make an appointment.

#### Precautions

All products manufactured by NITTO EUROPE NV are guaranteed to be free from defect at the time of shipping when tested according to NITTO EUROPE NV product specifications. Properties of the products are susceptible to change due to various influences such as composition and condition of the extrusion, impurities in or on the extrusion, temperature and humidity of storage and the surrounding environment during application etc. When the NITTO product is used in combination with other material, the user shall assure by his own tests the compatibility of the NITTO product in the resulting combination and whether the combination results in the expected performance.

#### Packaging and storage

The product should be protected against direct sunlight and extremes in temperature and humidity and stored upright in its original packaging. Once removed from its packaging, it should be protected against dust and other impurities.

#### Test methods and results

The properties of these products are determined in accordance with NITTO test methods. Detailed description of these methods are available on request. The above figures are average values, established to our best knowledge, but not to be used for specification purpose.

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Nitto Europe NV has obtained following certificates:







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