

Product: **EPT-Sealer EC-100 series** (flame retardant EPT-Sealer)

Product group: **Sealing Materials**

General description

Products of the Nitto Denko EC-100 Series are composed of a flexible foam sealing material consisting of EPDM rubber foam with a semi-closed cell structure mixed with a flame retarder. The EPDM rubber foam EC-100 is UL-94 HF-1 certified. Various types with adhesive layers are available, all of which take advantage of their flexible foam properties. The products can be used for waterproofing, airtightness, soundproofing, or thermal insulation according to the compression ratio.

Construction



EC-100
- Semi-closed EPDM foam



EC-110
- Semi-closed EPDM foam
- Acrylic based adhesive
- Non woven carrier
- Acrylic based adhesive
- Release liner

General purpose

Other tapes are available for specific application.

Characteristics

- Non-chlorine flame retardant used in foam compound. The foam has been certified by the UL94, HF-1, which is one of the most severe standards for flame retardancy of foams.
- Due to its very fine cell structure, the foam is easily compressible and combines perfectly with NITTO's adhesive technology. It features outstanding air-sealing and soundproofing.
- Superior heat resistance, excellent weatherability and ozone resistance vouch for the durability of the product.
- No heavy metals (such as Cd, Pb, Hg, Cr6) and no regulated substances (such as CFC's and halogen gases) are used during the manufacturing process nor in the product itself. These products comply with the RoHS and ELV directives. IMDS declarations are available upon request.

Application

EPT-Sealer EC-100 series are especially designed for waterproofing, air sealing, soundproofing and thermal insulation for electric/electronic equipment.

AUTOMOTIVE – ECU application, electric motors / actuators

INDUSTRIAL – mobile phones, information processing equipment and household appliances.



EC-130
- Semi-closed EPDM foam
- Acrylic based adhesive
- Polyester carrier (12 μm)
- Acrylic based adhesive
- Release liner

Minimal stretch due to carrier stiffness

Features

- Flame retardant UL94, HF-1 (EC-100)
- semi-closed cell structure
- super soft / conformable
- low compression load
- ozone resistance
- good weatherability
- excellent ageing performance
- sound absorption
- good recovery property
- wide range of performing tapes

Properties

Foam	Typical Value	Test Method
Thickness	1.5 to 25 mm*	ISO 1923
Density	85 kg/m ³	JIS K 6767
Elongation MD**	270 %	JIS K 6767
Tensile strength MD	70 kPa	JIS K 6767
25% Compression load	1.8 kPa	JIS K 6767
50% Compression load	2.8 kPa	JIS K 6767
80% Compression load	14.5 kPa	JIS K 6767
Flammability	HF-1	UL94 UL certification no. E52859
Watertightness (80%)	no leakage	Nitto Belgium U-shape method***
Tape		
Adhesion on BA steel at 180°	min. 700 cN/20 mm	EN 1939

* Thicker material available on request

** MD = Machine Direction



Complex	Typical Value	Test Method
Adhesion on 2B steel at 90°	min. 400 cN/20 mm	JIS Z 0237
Flammability	self-extinguishing	FMVSS 302
Weatherability	Tensile strength MD 60 kPa Elongation MD 140%	Sunshine Weatherometer
After 1080 hours (equivalent to 10 years outdoor exposure), test condition: 100 °C, test performed on tensile strength and elongation (JIS K 6767)		
Watertightness (70%)	no leakage	Nitto Belgium U-shape method

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.

Availability

Sheets: 900 mm x 2 m

Rolls: widths: 225 mm, 450 mm, 900 mm & lengths: 10m to 50m depending on the thickness

NB: 25mm thickness is only available in sheets. Please contact us for specific dimensions.

Application guidelines

- The performance of Nitto EPT-Sealer on specific substrate must be assured by the user before implementation.
- During storage and transport, do not over stack the product, as this may cause deformation.
- EPT-Sealer should be applied to clean and dry surface. Remove excess oil, moisture and dirt from the substrate surface to which the sheet is applied.
- In order to avoid entrapped air-bubbles, tension and shear, the customer should determine appropriate application conditions.
- The best application conditions are obtained at a temperature between 15 °C and 40 °C.
- Appropriate compression is needed to have sealing performance.
- In case of use of primer, check beforehand the impact of the primer to the performance of the EPT-Sealer. Wrong use of primer can lead to loss of adhesion.
- Please consult Nitto Belgium for any robotic application regarding more specific precautions.
- Thickness as referred in orders, article description and on the packaging is related to the foam and is excluding tape and release liner thickness.

If you require additional information on technical properties and application as well as product sampling or testing, please contact your local Nitto 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 willful misconduct, Nitto Belgium'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 Belgium 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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This datasheet replaces all previous versions

Nitto Belgium NV has obtained following certificates:

- ISO 9001

- ISO 14001

- ISO/TS 16949

Please check our website for applicable scope