SEALING MATERIALS

EPTSEALER® EE-1000 SERIES

General description

EPTSEALER EE-1000 is a semi-closed cell EPDM foam. The semi-closed cell structure combines the flexibility of open cell types with the excellent sealing capabilities of closed cell types (after compression). This unique foam can be laminated with Nitto's advanced adhesive technology to seal complex gaps against water, wind, dust, noise, and heat.

Features

- Semi-closed cell structure
- Super soft & conformable
- Low compression load
- Ozone resistance
- Good weatherability
- Fungus free in line with ISO 846
- Excellent ageing performance (dimensional heat stability)
- Good water sealing
- Excellent sound insulation
- PFAS and PFOS-free
- RoHS and ELV directives compliant
- Wide range of performing tapes

Application

EPTSEALER EE-1000 is specially designed to seal (complex) gaps against water, wind, dust, noise and heat. Depending on the application, the foam needs to be compressed by 50-80% to activate its sealing properties.

- Automotive: Sealing of HVAC unit, dashboard, air duct, firewall, battery.
- Home appliances: Sealing of refrigerators, driers, washing machines.
- New energy: Sealing of heat pumps, air-conditioners, EV chargers, solar panels.

Properties

EE-1000	Typical Value	Test Method
Thickness	3 to 30 mm*	ISO 1923
Density	95 kg/m³	ISO 845
Elongation MD**	430%	ISO 1798
Tensile strength MD**	90 kPa	ISO 1798
50% Compression load	5 kPa	Nitto test method
Watertightness (75%)	No leakage	Nitto U-shape ***
Chemical resistance	Stable	Immersion at 20 °C for 7 days
Test solution: acid (1%H2SO4) alkaline (1%NaOH), test performed on tensile strength and elongation acc. to ISO 1798.		
Ozone resistance	No cracks	Visual inspection
Flammability (Ref 10mm)	< 100 mm/min	FMVSS 302
Dimensional stability: 7 days at 70°C	≤ 3%	ISO 2796

Product range

Product range	Double coated tape	Application
EE-1000	Non	General purpose
EE-1010	Acrylic adhesive, non-woven carrier	General purpose
EE-1010EP	Acrylic adhesive, non-woven carrier	High-end tape for low surface energy
EE-1010P	Acrylic adhesive, PET carrier	Minimal stretch due to pet carrier
EE-1010T	Acrylic adhesive, transfer tape	More flexibility (complex shape)
EE-1040	Butyl adhesive, cloth carrier	Greasy, rough and rubber base substrates

Properties

Complex	Typical Value	Test Method
Adhesion to 2B steel (90°)	≥ 400 cN/20mm	EN 1939
Watertightness (65%)	No leakage	Nitto U-shape ***
Flammability (Ref 10mm)	< 100 mm/min	FMVSS 302
Temperature range	General: -40°C to 135°C EE-1040: -40°C to 80°C	
In case of extreme temperatures, we recommend performing application tests.		

CAUTION: The above are typical values and should not be used in writing specifications.
** Thicker material on request*
*** MD machine direction*
***** Details from the test methods are described on the customer product specification.

Warranty

The product is guaranteed to be free from defects 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

Rolls: widths (mm): 250, 330, 500 mm, 1000 mm & lengths: 10m to 60m depending on thickness.
Sheets: width 1000 mm & length 2 m
Please contact us for specific dimensions.

Storage conditions

The product should be protected against direct sunlight and extremes in temperature and humidity. Recommended storage and transport conditions are between 15 °C and 30 °C and between 40% and 75% relative humidity. The product should be stored in its original packaging in a well-ventilated room to avoid deterioration, deformation, and contamination. Once removed from its packaging, it should be protected against dust and other impurities. Do not over stack the product, as this may cause deformation.

Application guidelines

The performance of Nitto EPTSEALER on specific substrate must be assured by the user before implementation.
EPT-Sealer should be applied to clean and dry surface. Remove excess oil, moisture and dirt before application.
To avoid entrapped air-bubbles, tension and shear, the customer should determine appropriate application conditions. The best application conditions are obtained at a temperature range from 15 to 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 EPTSEALER.
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 packaging are related to the foam and excluding tape.

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. Nitto's liability is limited to the terms and conditions provided in the Product Specification and Nitto's General Terms and Conditions of Sale.

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.

Nitto Belgium NV has obtained the following certificates

- ISO 9001
- ISO 14001
- ISO 45001
- IATF 16949