

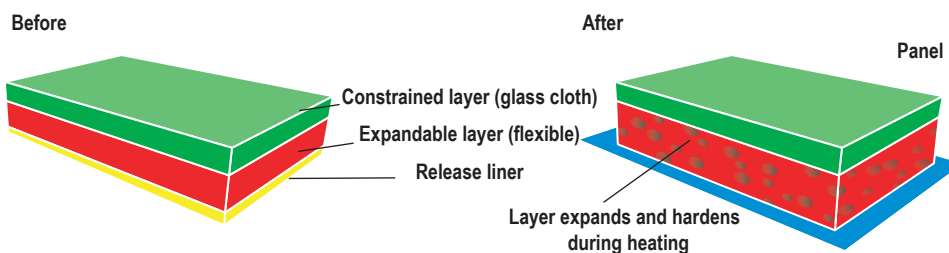
Product: **Nitohard AS-3000**

Product group: **NVH Materials**

General description

Nitohard AS-3000 is a heat-curing, epoxy/rubber based material for reinforcement of sheet metal, especially aluminium. The product is self-adhesive and bonds tightly to the metal sheet, even to curved surfaces. The epoxy/rubber resin is foamed and hardened by the heat of the electro-coating line.

Construction



Characteristics

Nitohard AS-3000 can easily be attached to metal sheets. After foaming and hardening during typical OEM electro-coating conditions it provides an excellent reinforcement to the substrate. The initial adhesive property permits an easy attachment to a variety of materials, even in upside-down applications.

The product can be attached to oily/greasy metal sheets and it remains flexible before foaming and adheres tightly to complex shapes and curved surfaces.

The special rubber epoxy formulation prevents strain of the substrate after hardening.

Nitohard AS-3000 functions in a wide temperature range without deterioration.

The product is available in die-cut shapes and in a thickness of 1.2 mm.

Application

Nitohard AS-3000 can be used in any reinforcement application such as: door panel, quarter panel, hood, front fender, trunk lid, roof panel, door handle, B-C pillar, door step, side sill, ...

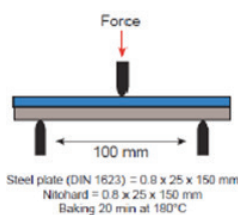
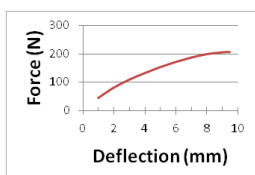
Features

- high reinforcement strength
- no sink marks on outer panel
- high adhesion at low temperature
- attachable to oily metal sheets
- applicable to complex shapes and curved surfaces
- excellent workability
- wide functional temperature range
- design, test and evaluation in our Automotive Technical Centre (ATC)
- robotic application possible

Properties

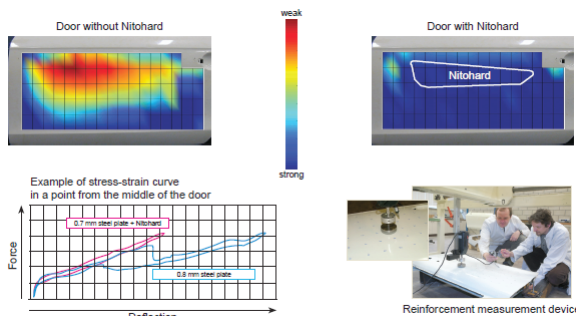
| | Typical Value | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| Initial thickness | 1.2 mm | ISO 1923 |
| Thickness after expansion | 3.0 mm | 20 min at 180 °C |
| Weight | 1600 g/m ² | ISO 845 |
| 90° Adhesion to Aluminium (before curing) | 25 N/25 mm | Nitto Belgium Test Method |
| Bending strength 1mm deflection (on 0.8 mm steel, after baking at 180°C for 20 min) | 43 N | |
| Transport and storage conditions | Temperature < 20 °C Relative humidity 40 to 75 % RH | |

3-point bending test



Baked on 0.8 mm steel (150 x 25mm) for 20 minutes at 180°C. Test speed is 5 mm/min.

Application performance



Warranty

The warranty period is equal to 1 month below 20°C from date of shipping from Nitto Belgium NV, provided that the terms and conditions (including storage) set out in the customer product specification are entirely respected.

Availability

2D Parts according to customer required dimensions.

Application guidelines

- Keep the product in its original packaging and do not open until use. Keep Nitohard away from dirt, oil, moisture, direct sunlight and heat sources.
- Do not apply a partial load on this product since its thickness will change.
- Nitohard should be applied to clean and dry surface. Remove excess oil, moisture and dirt from the substrate to which the part is applied.
- Avoid entrapment of air (air bubbles) and lifting of its edges when applying Nitohard. The customer should determine appropriate application conditions.
- We recommend a curing temperature of 180°C for 20 minutes. Other temperatures and curing times are possible; please consult our automotive development team.
- Take proper precautions such as wearing protective gloves when handling. Refer to our SDS (Safety Data Sheet) for more information about the safety of the product.

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 wilful 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.

Edition: January 2019
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This datasheet replaces all previous versions

Nitto Belgium NV has obtained following certificates:

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



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

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