Building Material Scout

# Product Verification

## Sustainability

according to BNB BN 2015
according to BREEAM International New Construction 2016
according to DGNB NBV 2015
according to DGNB Gebäude Neubau 2018
according to LEED Building Design and Construction V3 (2009)
according to LEED Building Design and Construction V4 (2015)

**Product description:**
Noiseflex® MH white is a white, open-cell foam manufactured from melamine resin.

OEKO TEX® STANDARD 100

**Storage:**
Avoid persistent direct UV exposure, store Noiseflex® MH white formed parts in a dry place.
Before application, store the formed parts for three, better still five, days in a standard climate or in the climate of the application. The reason behind this is the sorption properties of melamine resin. The dimensions of the parts will change as they absorb or adsorp moisture.

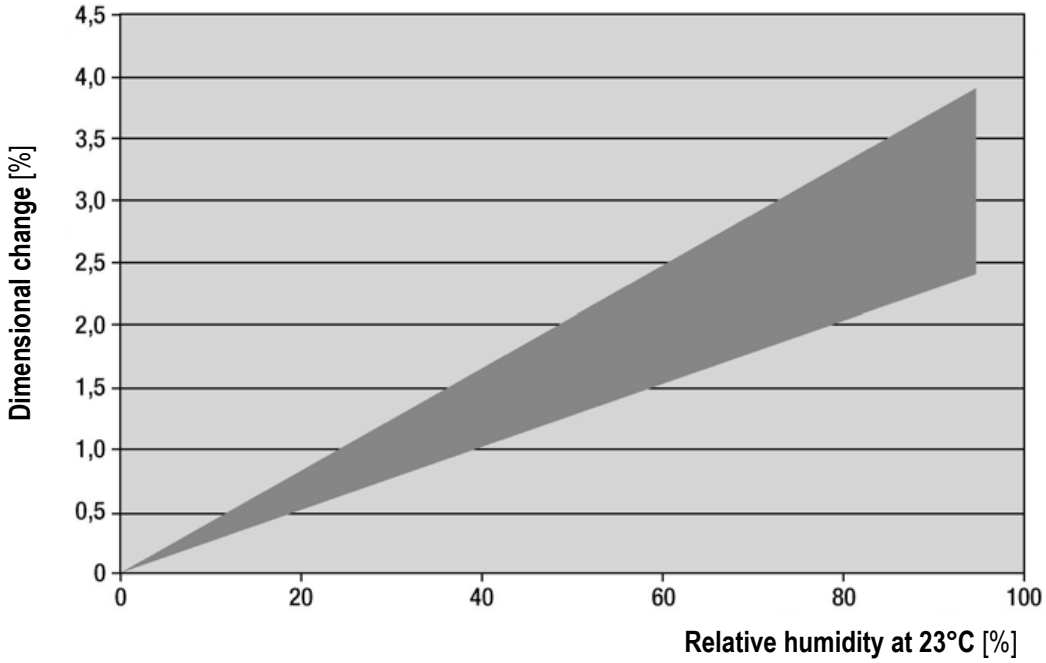


**Fig. 1.**
Noiseflex® MH white dimensional change as a function of room humidity at 23°C ambient temperature.

**Physical properties:**
The thermoset properties and open cell structure of the melamine foam impart attractive characteristics:

- High sound absorption – good sound absorbent
- Low thermal conductivity – good thermally insulating properties
- Good fire resistance
- Low weight
- High continuous use temperatures
- No embrittlement at low temperatures

| Properties | Values – units | Standards |
|---|---|---|
| Specific weight | 8.5 ± 1.5 kg / m³ | EN ISO 845 |
| Compression stress (average value) | > 5 kPa | EN ISO 3386-1 |
| Tensile strength (average value) | > 100 kPa | EN ISO 1798 |
| Ultimate elongation (average value) | > 18% | EN ISO 1798 |
| Thermal conductivity | ≤ 0.04 W / (m·K) | DIN EN 12667 |

**Table 1.**
Physical properties of Noiseflex® MH white.

| Fire behaviour | Values – units | Standards |
|---|---|---|
| Europe | Class B / C, depending on thickness | EN 13501 |
| Germany | Building material class B1 | DIN 4102-1 |
| USA | UL 94 | V – 0, HF – 1 |

**Table 2.**
Fire behaviour of Noiseflex® MH white.

The results of acoustic tests in the impedance tube in accordance with DIN EN ISO 10534-2 and in the reverberation chamber in accordance with DIN EN ISO 354 are shown in Figures 2 and 3. Noiseflex® MH white has excellent sound absorption qualities in the medium to high frequency range. Improvements to sound absorption at low frequencies may, for instance, be achieved through additional layers of heavy material.

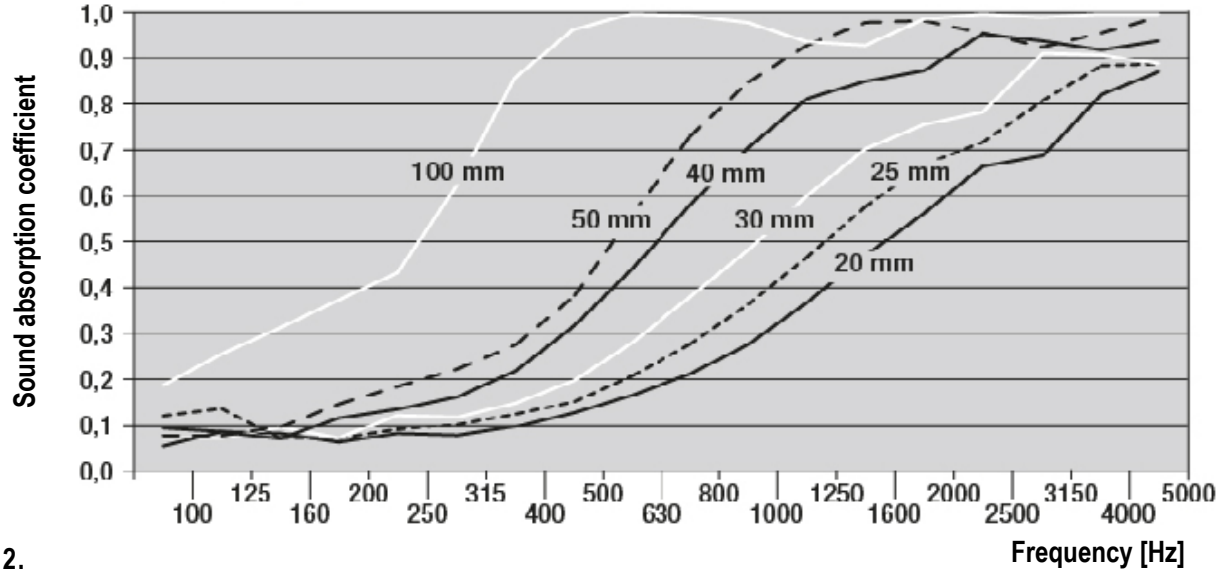


**Fig. 2.**
Noiseflex® MH white sound absorption coefficient as a function of the thickness pursuant to DIN EN ISO 10534-2 (impedance tube).

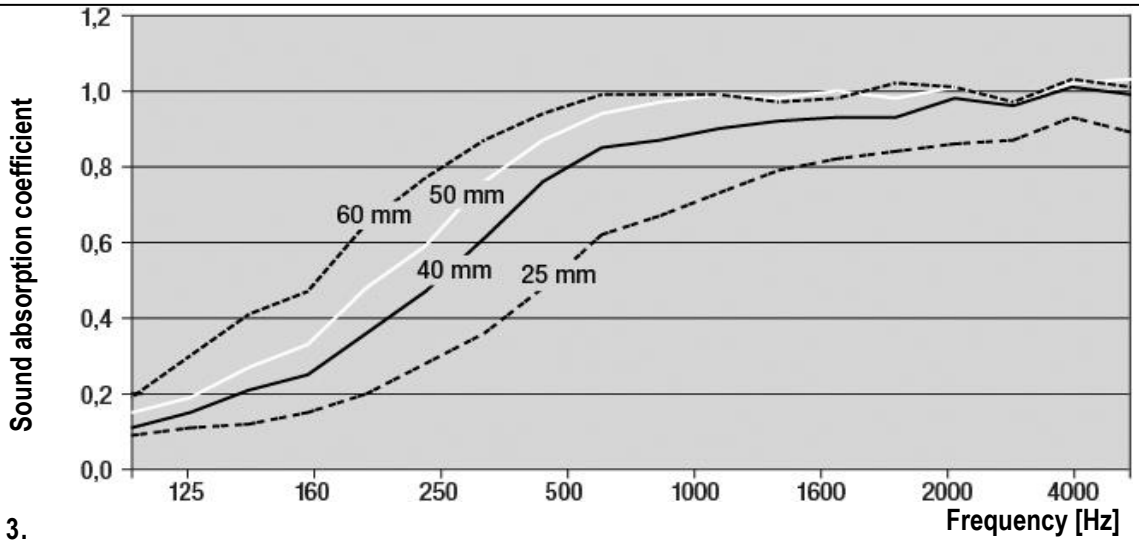


**Fig. 3.**
Noiseflex® MH white sound absorption coefficient as a function of the thickness, pursuant to DIN EN ISO 354 (reverberation chamber).

**Chemical resistance:**
According to EN ISO 175, Noiseflex® MH white as a thermoset material is resistant to many substances (Table 3). The compression stress pursuant to ISO 3386-1 (40% compression, 4th load cycle) and the sample geometry were the evaluation criteria. The figures are for a test temperature of 23°C.

| Media group | Medium | Evaluation*) |
|---|---|---|
| Acids | Acetic acid 100% | + |
| | Lactic acid 10% | + |
| | Nitric acid 10% | - |
| | Hydrochloric acid 10% | - |
| | Sulphuric acid 10% | - |
| | Citric acid 10% | + |
| Other chemicals | Dishwashing liquid 0.1% | + |
| | Olive oil | + |
| | Sodium chloride solution 3.6% | + |
| | Universal cleaner 0.1% | + |
| | Water | + |
| Hydrocarbons | Gasoline | + |
| | Diesel | + |
| | Kerosine | + |
| Lyes | Ammonia water 25% | + |
| | Sodium carbonate 25% | + |
| | sodium hydroxide solution 40% | + |
| Ester | Butyl acetate | + |
| Ketones | Acetone | + |
| Alcohols | Ethanol | + |
| | Methanol | + |

*) + resistant
- not resistant

**Table 3.**
Chemical resistance of Noiseflex® MH white.

**Product safety and environment:**
Noiseflex® MH white is produced without the use of halogen-containing hydrocarbons. The product is not water-polluting.
Noiseflex® MH white is delivered without propellants and not subject to mandatory labelling under the Ordinance on Hazardous Substances.
Noiseflex® MH white waste may be recycled thermally and materially.

**Emission behaviour:**
Noiseflex® MH white has been tested for emission of harmful volatile substances in accordance with the requirements of the AgBB test method and complies with these requirements.
Noiseflex® MH white has been tested for harmful volatile substances and classified in accordance with the French directive for the identification of building products or wall claddings, floor coverings, paints or lacquers, as published on 25 March 2011 (décret DEVL1101903D) and on 13 May 2011 (arrêté DEVL1104875A) and was classified as VOC emission class A.



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