



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 grey is a light grey, open-cell foam manufactured from melamine resin.

Storage:

Avoid persistent direct UV exposure, store Noiseflex® MH grey 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 adsorb moisture.

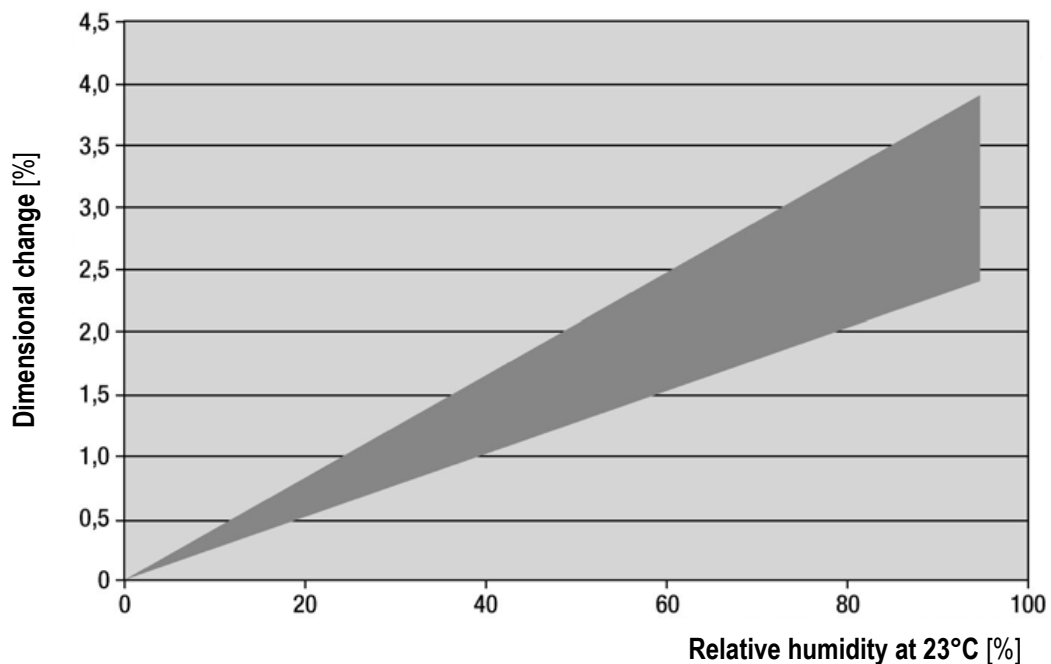


Fig. 1.

Noiseflex® MH grey 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	9 ± 1.5 kg / m ³	EN ISO 845
Compression stress (average value)	> 9 kPa	EN ISO 3386-1
Tensile strength (average value)	> 120 kPa	EN ISO 1798
Ultimate elongation (average value)	> 20 %	EN ISO 1798
Max. application temperature	240 °C	DIN EN ISO 2440

Table 1.

Physical properties of Noiseflex® MH grey

Fire behaviour	Values – units	Standards
Europe	On request Class B / C, depending on thickness	EN 45545 - 2 EN 13501 - 1
Germany	Building material class B1 S4, ST2, SR2, FED ≤ 1	DIN 4102 - 1 DIN 5510 - 2
USA	complies with: burn rate 0 mm / min. UL 94 on request on request on request on request	FMVSS 302 V – 0, HF – 1 ASTM E 662 ASTM E 162 ASTM E 84 ASTM E 1354
France	M1 F4	NF P 92-507 NF F 16-101
UK	Class 1 on request on request on request	BS 476 part 7 part 6 BS 6853 Annex D.8.4 BS 6853 Annex B2
International	on request	ISO 4589 - 2

Table 2.

Fire behaviour of Noiseflex® MH grey.

Figure 2 shows the thermal conductivity of Noiseflex® MH grey as a function of the mean temperature. With its values of < 0.035 W / (m·K) at 10°C, Noiseflex® MH grey occupies pole position among insulating materials in the market.

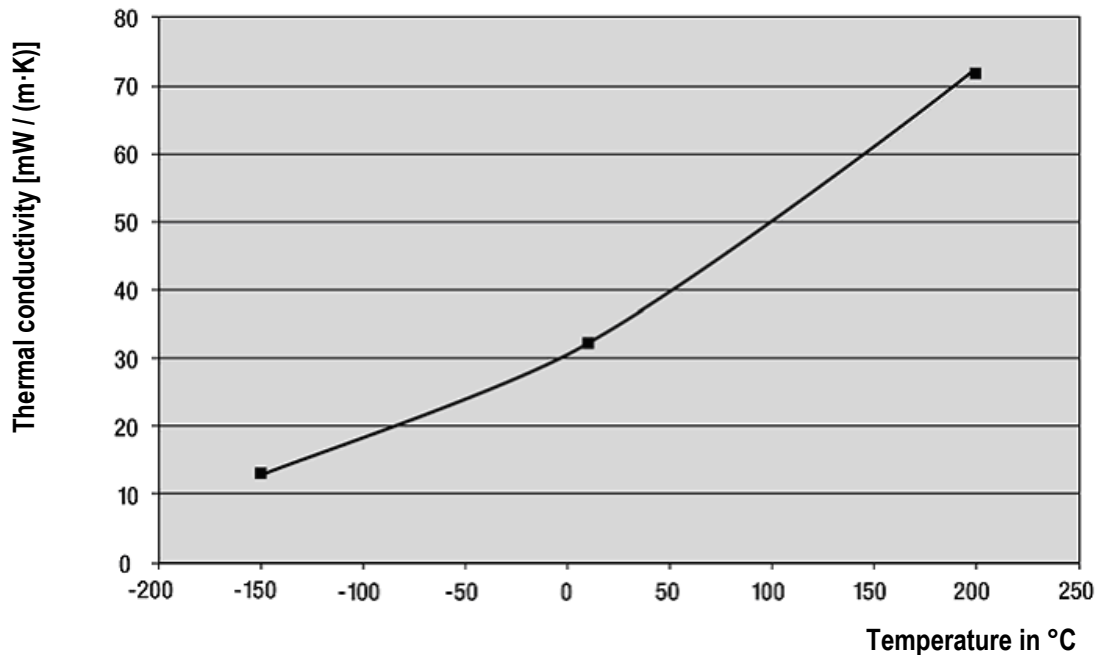


Fig. 2. Thermal conductivity of Noiseflex® MH grey. Measurements by ZAE Bayern, Würzburg, to DIN EN 12 667, with Lola 3 two-plate instrument.

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 3 and 4. Noiseflex® MH grey 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.

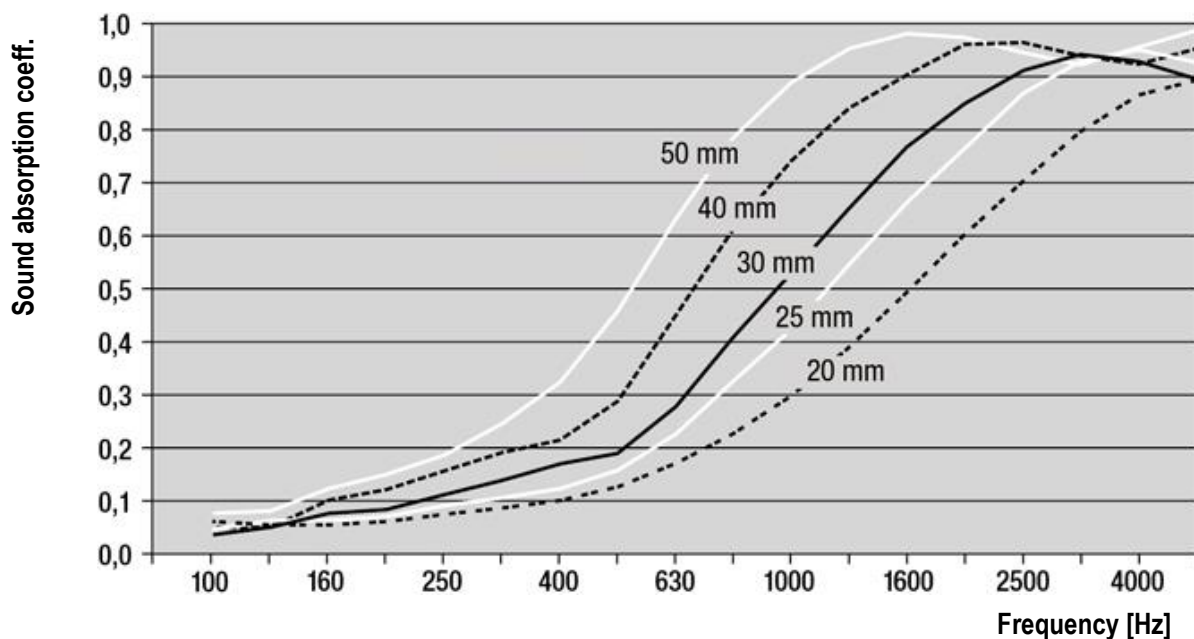


Fig. 3. Noiseflex® MH grey sound absorption coefficient as a function of the thickness, pursuant to DIN EN ISO 10534-2 (impedance tube).

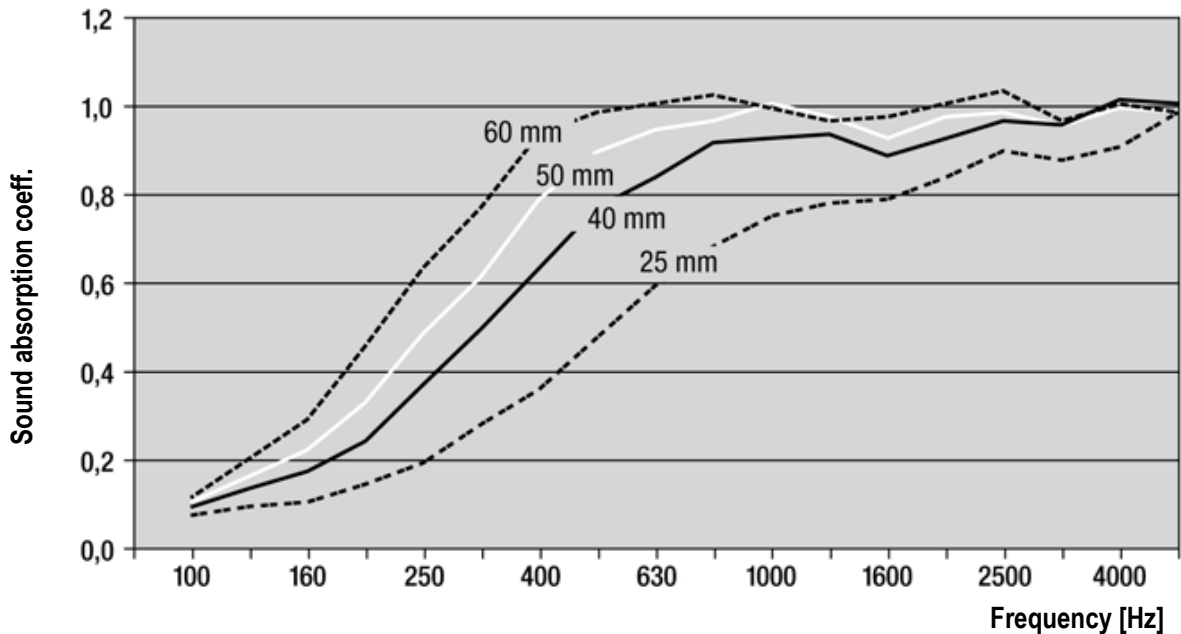


Fig. 4. Noiseflex® MH grey sound absorption coefficient as a function of the thickness, pursuant to DIN EN ISO 354 (reverberation chamber).

Chemical resistance:

According to EN ISO 175, Noiseflex® MH grey 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	Formic acid 90%	-
	Acetic acid 90%	+
	Lactic acid 10%	+
	Phosphoric acid 50%	+
	Nitric acid 10%	-
	Hydrochloric acid 10%	-
	Sulphuric acid 10%	-
	Citric acid 10%	+
Other chemicals	Sodium chloride solution 3.6%	+
	Water	+
Hydrocarbons	Petrol	+
	Diesel	+
	Kerosine	+
Lyes	Ammonia water 25%	+
	Sodium carbonate 25%	+
	Sodium hydroxide solution 40%	+
Ester	Butyl acetate	+

Media group	Medium	Evaluation*)
Ketones	Acetone	+
Other solvents	Glycol ether	+
Alcohols	Butanol	+
	Ethanol	+
	Glycol	+
	Glycerine	+
	Isopropanol	+
	Methanol	+

*) + resistant
 - not resistant

Table 3.
 Chemical resistance of Noiseflex® MH grey.

Product safety and environment:

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

Emission behaviour:

Noiseflex® MH grey 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 grey 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.

Attention! Important Note:

Above information are based on best present knowledge of current technology, but do not guarantee faultless processing of our products. The information is based on practical results of our tests, but is not binding and does not constitute warranties of characteristics in terms of Federal Supreme Court jurisdiction. Our information does not constitute a legally binding assurance of certain properties or suitability for a specific purpose. Supplementary information by our specialists are merely recommendations, for which no liability is accepted. Due to the many possible applications of our products, we recommend subjecting the project to a thorough suitability test on original materials before release for further application. Since our information are non-binding we do not warranty their correctness. For this reason we accept no liability for possible improper processing based on information submitted by our employees. This technical data sheet replaces all previous versions and is valid until a new version is issued, or until Dec. 31, 2024. Please request the latest version after Jan. 01, 2025.

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