Technical Information

Noiseflex® MH grey EcoBalanced

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

Product safety and the environment:
Noiseflex® MH grey EcoBalanced is manufactured without the use of halogenated hydrocarbons. The material is not classified as hazardous to water. Noiseflex® MH grey EcoBalanced is free from blowing agents on delivery and is not subject to labelling requirements under the Hazardous Substances Ordinance. Waste from Noiseflex® MH grey EcoBalanced can be recycled thermally or as raw material.

OEKO TEX® STANDARD 100

Noiseflex® MH grey EcoBalanced has a Product Carbon Footprint (PCF)* that is up to 50 per cent lower than that of the standard variant Noiseflex® MH grey. This is achieved through the consistent application of two control mechanisms:

- Noiseflex® MH grey EcoBalanced is manufactured in a resource-optimised process using renewable energy.* Fossil raw materials are completely replaced by sustainably certified biomass.*
- Furthermore, the processing of the base materials at BOSIG is powered 100 per cent by electricity from renewable energy sources, comprising a proportion generated by the company's own photovoltaic systems and electricity purchased from renewable energy sources, in order to reduce production-related CO_2 emissions.**

Emission behaviour:
Noiseflex® MH grey EcoBalanced 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 EcoBalanced has been tested and classified in accordance with the French regulation on the labelling of construction products, wall coverings, floor coverings, paints and varnishes with regard to emissions of volatile pollutants, published on 25 March 2011 (Décret DEVL1101903D) and 13 May 2011 (Arrêté DEVL1104875A), and has been classified as VOC emission class A.

* This information is based on documents and data provided by BASF SE.
** BOSIG Energy Management

BOSIG GmbH D – 73333 Gingen, Brunnenstraße 75 - 77 Telephone +49(0)7162-40 99-0 Fax +49(0)7162-40 99-200 www.bosig.de info@bosig.de

BOSIG has been granted the official Basotect® EcoBalanced label by BASF SE.

Storage:
Prolonged exposure to direct UV radiation must be avoided. Store Noiseflex® MH grey EcoBalanced components in a dry place. Before application, store the formed parts for at least three days, preferably five days under standard climatic conditions or under the climatic conditions expected in the intended application. The reason behind this is the sorption properties of melamine resin. The dimensions of the parts will change as they absorb or release moisture.

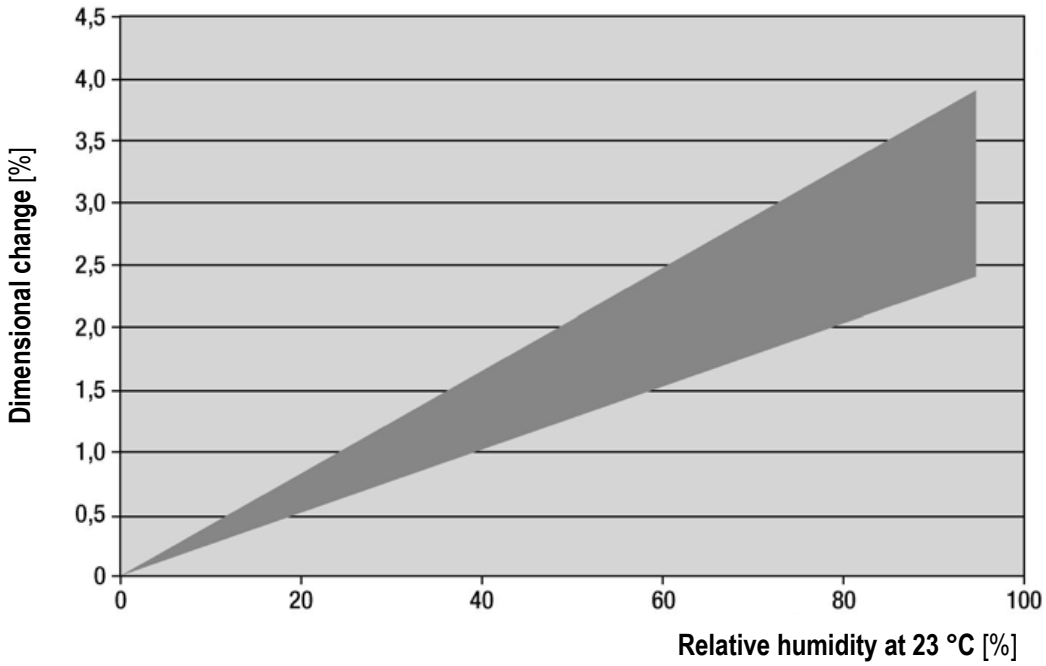

Fig. 1.
Noiseflex® MH grey EcoBalanced dimensional change as a function of room humidity at 23 °C ambient temperature.

Physical properties:
The thermoset nature and open-cell structure of the melamine resin foam provide the following properties:

- High sound absorption
- 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
Bulk density	9 ± 1.5 kg/m³	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
Maximum operating temperature	240 °C	DIN EN ISO 2440

Table 1.
Physical properties of Noiseflex® MH grey EcoBalanced.

Fire behaviour	Values – units	Standards
Europe	Available on request Class B or 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 requirement: 0 mm/min. UL 94 Available on request Available on request Available on request Available 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 Available on request Available on request Available on request	BS 476 part 7 part 6 BS 6853 Annex D.8.4 BS 6853 Annex B2
International	Available on request	ISO 4589 - 2

Table 2.
Fire behaviour of Noiseflex® MH grey EcoBalanced.

Figure 2 shows the thermal conductivity of Noiseflex® MH grey EcoBalanced as a function of the mean temperature. With a value of less than 0.035 W/(m·K) at 10 °C, Noiseflex® MH grey EcoBalanced offers outstanding thermal insulation performance compared with conventional insulation materials.

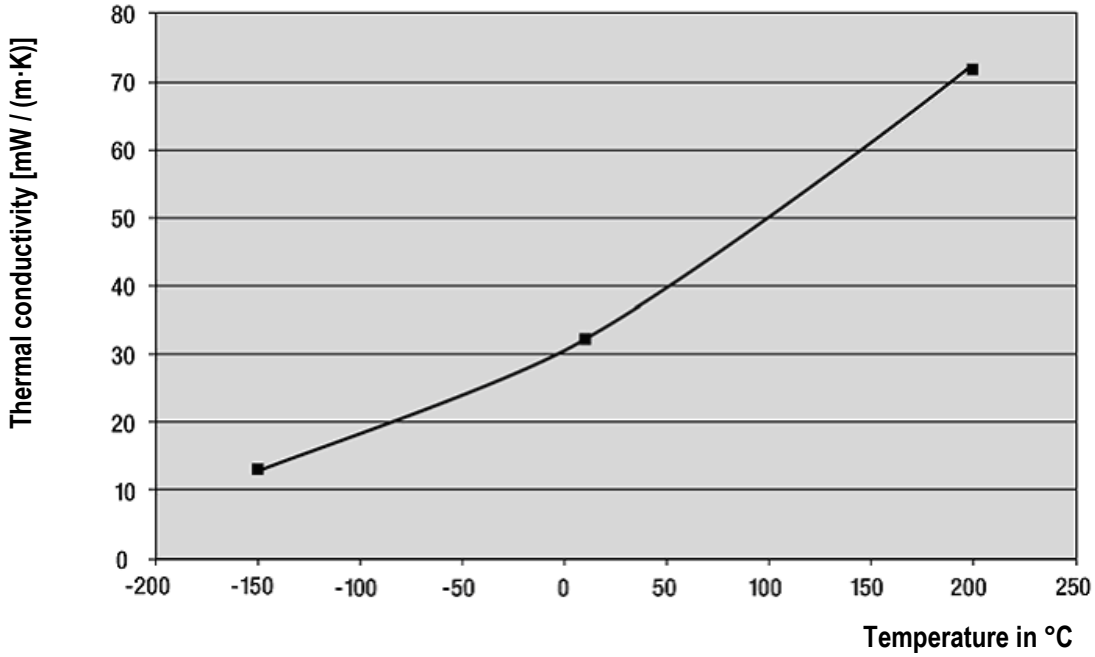

Fig. 2.
Thermal conductivity of Noiseflex® MH grey EcoBalanced. Measured by ZAE Bayern, Würzburg, in accordance with DIN EN 12667 using a Lola 3 two-plate apparatus.

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 EcoBalanced 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.

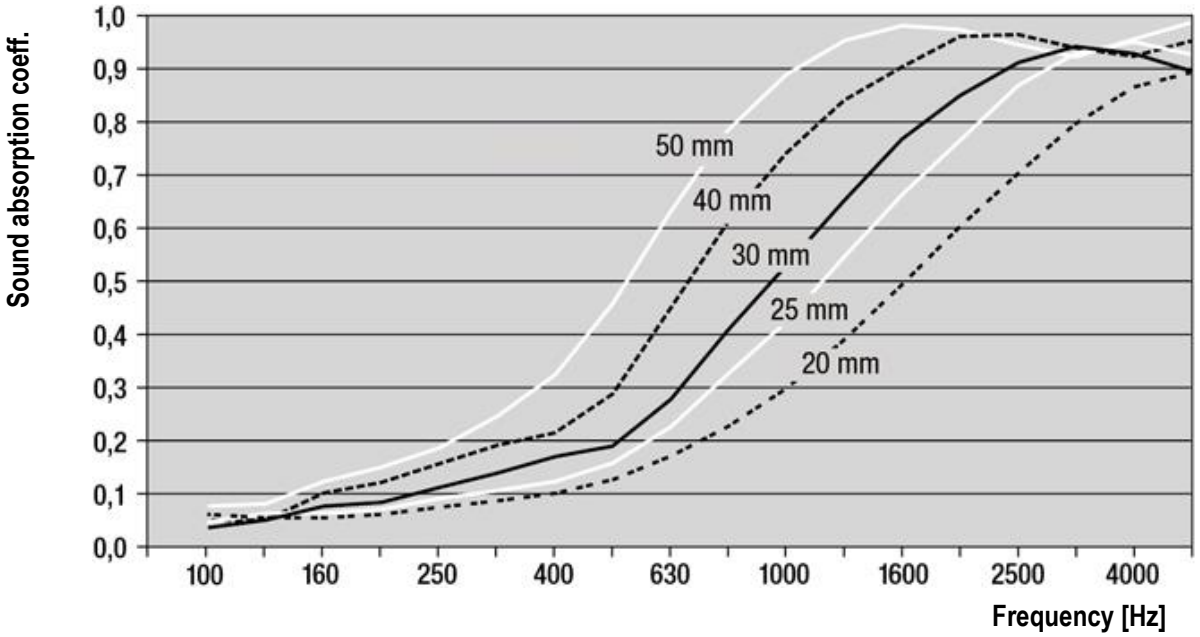

Fig. 3.
Noiseflex® MH grey EcoBalanced sound absorption coefficient as a function of the thickness, pursuant to DIN EN ISO 10534-2 (impedance tube).

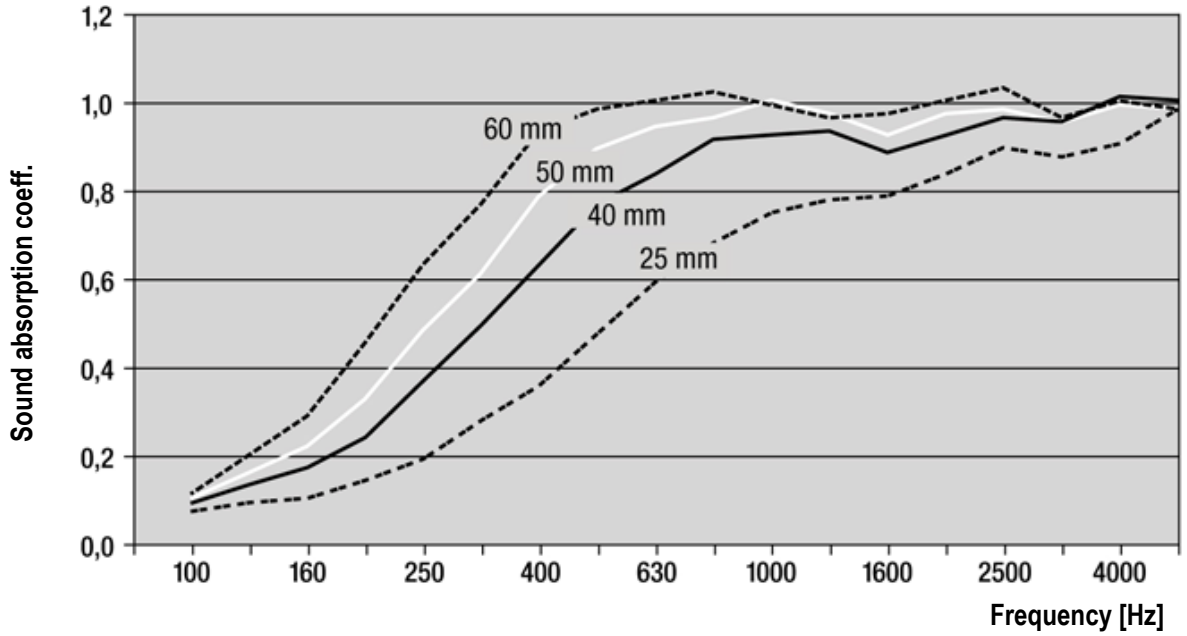

Fig. 4.
Noiseflex® MH grey EcoBalanced sound absorption coefficient as a function of the thickness, pursuant to DIN EN ISO 354 (reverberation chamber).

Chemical resistance:
According to EN ISO 175, Noiseflex® MH grey EcoBalanced 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	+
	Kerosene	+
Lyes	Aqueous ammonia 25%	+
	Sodium carbonate 25%	+
	Sodium hydroxide solution 40%	+
Ester	Butyl acetate	+
Ketones	Acetone	+
Other solvents	Glycol ether	+
Alcohols	Butanol	+
	Ethanol	+
	Glycol	+
	Glycerine	+
	Isopropanol	+
	Methanol	+

*) + resistant
- not resistant

Table 3.
Chemical resistance of Noiseflex® MH grey EcoBalanced.

Attention! Important Note:
The above information is based on best present knowledge of current technology, but does 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 regarding specific product 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. Any supplementary information provided by our specialists is advisory only, and no liability is accepted for it. 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 is non-binding we do not warrant its accuracy. For this reason we accept no liability for possible improper processing based on information provided by our employees.
This technical data sheet replaces all previous versions and is valid until a new version is issued, or until Dec. 31, 2026. Please request the latest version after Jan. 01, 2027.

Dr. Hermann, Anwendungstechnik / Application Technology, Gingen / Fils

BOSIG GmbH D – 73333 Gingen, Brunnenstraße 75 - 77 Telephone +49(0)7162-40 99-0 Fax +49(0)7162-40 99-200 www.bosig.de info@bosig.de