Technical Information

Noiseflex® Classic MH EcoBalanced

Product description:
Noiseflex® Classic MH EcoBalanced are sheet-shaped broadband absorbers made of Noiseflex® MH EcoBalanced. They can produce an improvement of room acoustics mainly at medium and high frequencies. Noiseflex® MH EcoBalanced is a flexible, open-cell foam material made from melamine resin. Its typical feature is the filigree, spatial network structure, which is formed by slim and thus easily ductile fillets. Noiseflex® MH EcoBalanced is characterised in particular by its high sound absorption capacity and low weight. These properties make Noiseflex® Classic MH EcoBalanced suitable for a wide range of acoustic applications, particularly in recording studios, hi-fi set-ups, open-plan offices, production halls and factory buildings, as well as in event centres. When used appropriately, Noiseflex® Classic MH EcoBalanced is capable of significantly reducing reverberation time and sound levels, for example in halls.

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

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

- Noiseflex® MH 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.**

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

BASF's Basotect® EcoBalanced partner

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

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Physical characteristics:
Noiseflex® Classic MH EcoBalanced is chemically resistant to many substances. It does not contain halogenated hydrocarbons.

Technical Data:

Absorber	Noiseflex® MH EcoBalanced melamine resin foam	
Fire resistant properties	B1 – flame-retardant	DIN 4102-1
Raw density	7-10.5 kg/m³, depending on colour	EN ISO 845
Tensile strength (average value)	> 100 kPa	ISO 1798
Elongation at break (average value)	> 18 %	ISO 1798
Compressive strength (average value)	> 5 kPa	EN ISO 3386-1
Thermal conductivity	λ ≤ 0.04 W / (m·K), depending on temperature	DIN EN 12667

Colours:
Noiseflex® Classic MH EcoBalanced absorbers are available in the following colours as standard:

anthracite (Dark) | white | grey

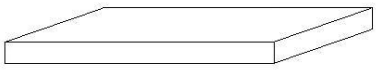
Due to product properties, variations in colour, pore size and pore structure may occur. Tolerances in width and length of up to 1.5% are possible.

Design and dimensions:

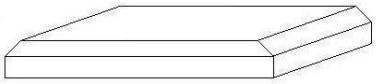
Dimensions

1000 x 500 x 30 mm
1000 x 500 x 50 mm
1000 x 500 x 70 mm
1000 x 500 x 100 mm

Noiseflex® Classic MH white EcoBalanced
Noiseflex® Classic MH grey EcoBalanced
Noiseflex® Classic MH Dark EcoBalanced



Noiseflex® Classic Plus MH white EcoBalanced
Noiseflex® Classic Plus MH grey EcoBalanced
Noiseflex® Classic Plus MH Dark EcoBalanced



Furthermore, the following types of both variants are available:
Noiseflex® Classic MH white, grey and Dark EcoBalanced as well as Noiseflex® Classic Plus MH white, grey and Dark EcoBalanced **with self adhesive coating.**
Noiseflex® Panino MH white, grey and Dark EcoBalanced **with heavy foils Noiseflex® Vibra heavy (5 and 8 kg / m²) and with self adhesive coating.**

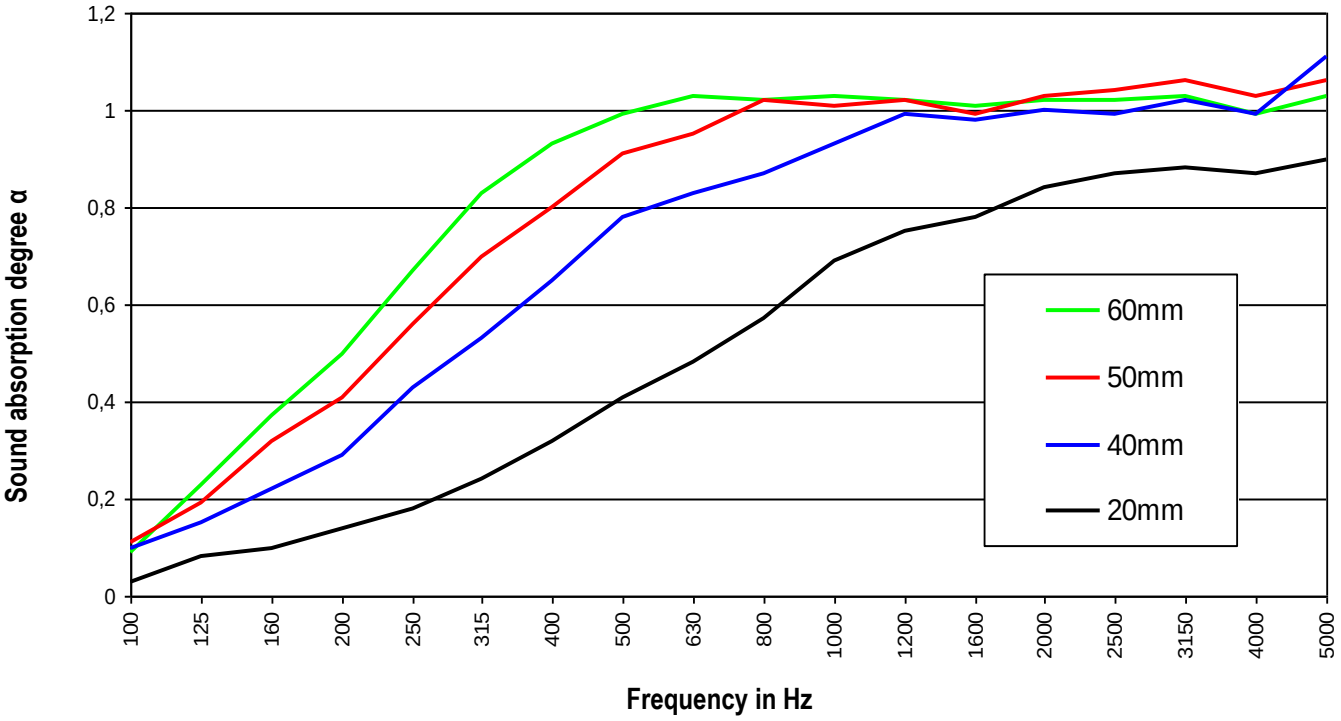
Processing instructions:
Dust generated during machining, e.g. sawing or milling, should be extracted directly at the cutting point. It is recommended to wear a dust mask during these operations.
The moisture content of the material varies depending on the ambient conditions.
As a result, the dimensions of the material may change, similar to wood, concrete or clay bricks. This behaviour must be taken into account during processing. Foam components should be unpacked at least three to five days before installation and stored under the climatic conditions of their intended application. This is necessary to prevent unwanted changes to the material's dimensions – in length, width and thickness – at a later stage.

For full-surface gluing of Noiseflex® Classic MH EcoBalanced to walls or ceilings we recommend our BOSIG Acoustic Adhesive. Please observe the technical instruction sheet specifications and the processing notes of BOSIG Acoustic Adhesive. For the best visual appearance, we recommend installing panels, pyramids and other cut shapes with a shadow gap of 10–20 mm.

Sound absorption of Noiseflex® Classic MH EcoBalanced in the reverberation room as per DIN EN ISO 354

Sound absorption according of the thickness								
Frequency [Hz]	20mm		40mm		50mm		60mm	
	Thirds α_s	Octaves α_p	Thirds α_s	Octaves α_p	Thirds α_s	Octaves α_p	Thirds α_s	Octaves α_p
100	0.03		0.10		0.11		0.09	
125	0.08	0.05	0.15	0.15	0.19	0.20	0.23	0.25
160	0.10		0.22		0.32		0.37	
200	0.14		0.29		0.41		0.50	
250	0.18	0.20	0.43	0.40	0.56	0.55	0.67	0.65
315	0.24		0.53		0.70		0.83	
400	0.32		0.65		0.80		0.93	
500	0.41	0.40	0.78	0.75	0.91	0.90	0.99	1.00
630	0.48		0.83		0.95		1.03	
800	0.57		0.87		1.02		1.02	
1000	0.69	0.65	0.93	0.95	1.01	1.00	1.03	1.00
1200	0.75		0.99		1.02		1.02	
1600	0.78		0.98		0.99		1.01	
2000	0.84	0.85	1.00	1.00	1.03	1.00	1.02	1.00
2500	0.87		0.99		1.04		1.02	
3150	0.88		1.02		1.06		1.03	
4000	0.87	0.90	0.99	1.00	1.03	1.00	0.99	1.00
5000	0.90		1.11		1.06		1.03	

Sound absorption of Noiseflex® Classic MH EcoBalanced in the reverberation room as per DIN EN ISO 354



Sound Absorption Classes of Noiseflex® Classic MH EcoBalanced according to DIN EN ISO 11654

Thickness [mm]	Individual value α_w to DIN EN ISO 11654	Sound absorption class to Annex B of DIN EN ISO 11654	Noise reduction coefficient NRC to ASTM C 423
20	0.45 (H)	D	0.55
40	0.70 (M,H)	C	0.80
50	0.85 (H)	B	0.90
60	0.95	A	0.95

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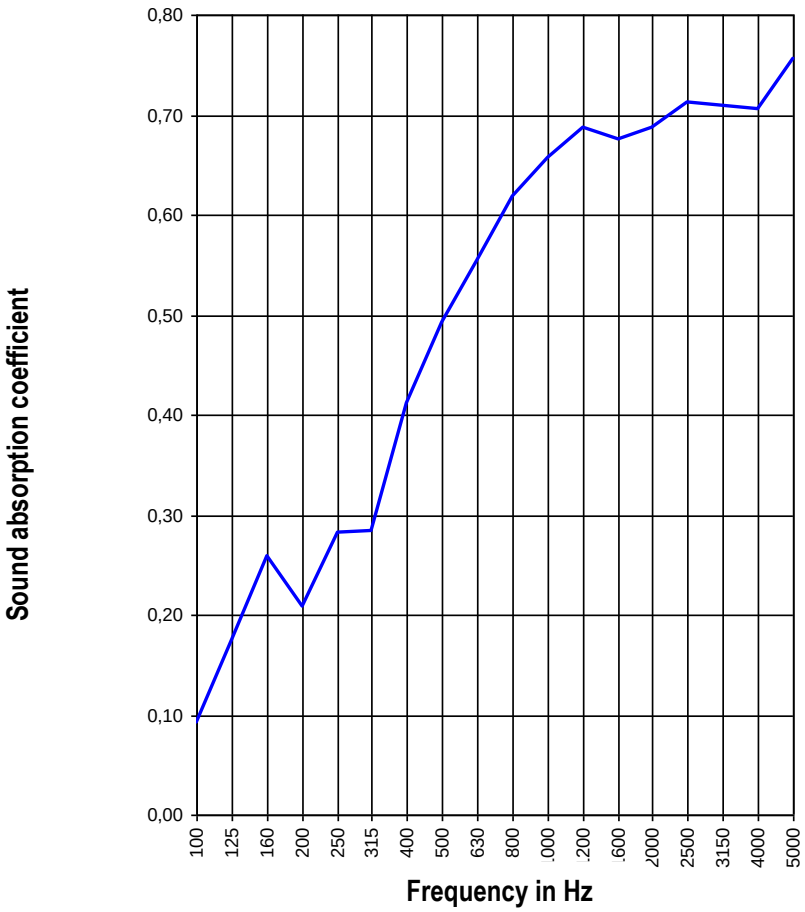
Sound absorption of Noiseflex® Classic MH EcoBalanced as a baffle system in the reverberation room as per DIN EN ISO 354

16 elements 1000 x 500 x 50 mm with border type J, hung horizontally, distance between rows 600mm.

Room volume:	391.6 m³	Test sound:	Broad band noise
Room surface area:	322.2 m²	Receive filter:	Third octave band filter
Date of measurement:	Dec. 13, 2011	Testing laboratory:	TÜV Rheinland LGA Products GmbH

Sound absorption coefficient α		
Frequency [Hz]	Thirds	Octaves
	α	α
100	0.09	0.18
125	0.18	
160	0.26	
200	0.21	0.26
250	0.28	
315	0.28	
400	0.41	0.49
500	0.49	
630	0.55	
800	0.62	0.65
1000	0.66	
1200	0.69	
1600	0.68	0.69
2000	0.69	
2500	0.71	
3150	0.71	0.72
4000	0.71	
5000	0.76	



Individual value α_w to DIN EN ISO 11654	Noise absorption class to Annex B of DIN EN ISO 11654	Noise reduction coefficient NRC to ASTM C 423
0.50 (H)	D	0.50

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