



System data sheet
BASWA Core

Issued 2020 / 1

Content

1	Application	1
2	System profile	2
3	System weights	3
4	System construction	3
5	Acoustic system measurement values	4
6	Installation time	7
7	Legal notice	8

System data sheet

BASWA Core

1 Application

The BASWA Core System is used as a seamless, thermally conductive acoustic system for thermoactive component systems (water-guided concrete core temperature control). It serves to transfer the energy produced in the room through the sound-absorbing BASWA Core System into the thermally activated ceiling.

BASWA Core guides the thermal energy of the thermoactive component systems through the aluminium profiles and the acoustic coating.

With BASWA Core you can efficiently use the storage capacity of thermoactive component systems to heat and cool buildings without sacrificing the best room acoustics and jointless, modern architecture.

Properties:

- Excellent broadband sound absorption up to $\alpha_w = 0.80$ /class B
- Non-flammable (A2-s1, d0) according to DIN EN 13501-1
- Heating: max. 80 % (with 70% occupancy of the surface)
- Cooling: max. 74% (with 70% occupancy of the surface)
- Thermal transmittance U :
30 mm system: 4.78 [W/(m² K)]
50 mm system: 3.87 [W/(m² K)]
- standard colour ~ NCS S 0500 – N
- Minimal installation height- System thicknesses 30 mm / 50 mm
- Smooth, seamless surface
- Almost unlimited colour choice

Suitable for processing:

- Horizontal, inclined or vertical surfaces
- Seamless, straight surfaces up to sizes of 500 m²
- Simply concave curved from radii > 500 cm
- Surfaces exposed to sidelight

Requirements for the substrate (ceiling / wall):

For the installation of the BASWA Core System, the substrate must fulfil the following requirements:

- Must be mineral, solid (concrete)
- Must correspond to the required final shape, flat surface according to the requirements for the flatness of component surfaces according to DIN 18202
- Must be stable
- free of sintered layers and switch release agents
- dust-free, free of impurities and harmful efflorescence
- load-bearing, strong and sufficiently dimensionally stable, adhesive tensile strength $> 0.3 \text{ kN/m}^2$ (30kg/m^2)
- airtight
- crack-free
- Guarantee of dew point prevention
- Dry (residual moisture $\leq 3 \text{ mass } \%$), not water-repellent

Processing requirements:

BASWA Core acoustic systems can only be installed by companies that have been trained by BASWA acoustic AG and hold a BASWA certificate. BASWA acoustic AG exclusively supplies certified companies. Furthermore, our current BASWA planning documents and processing guidelines apply.

2 System profile

- multilayer system
- Grain size of the final layer 0.3 mm BASWA Top / 0.5 mm Fine/ 0.7 mm Base
- Surface Quality Standard <Q2> / max. <Q3>

3 System weights

From the lower edge of the base:

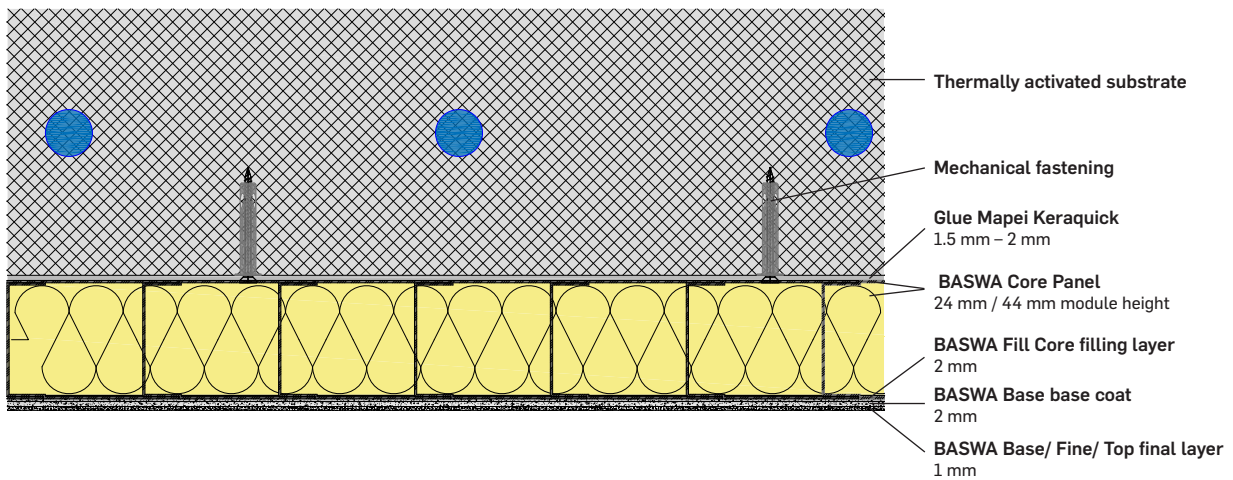
System thickness 30 mm approx. 140 N/m² (ca. 14 kg/m²)

System thickness 50 mm approx. 180 N/m² (ca. 18 kg/m²)

Comment:

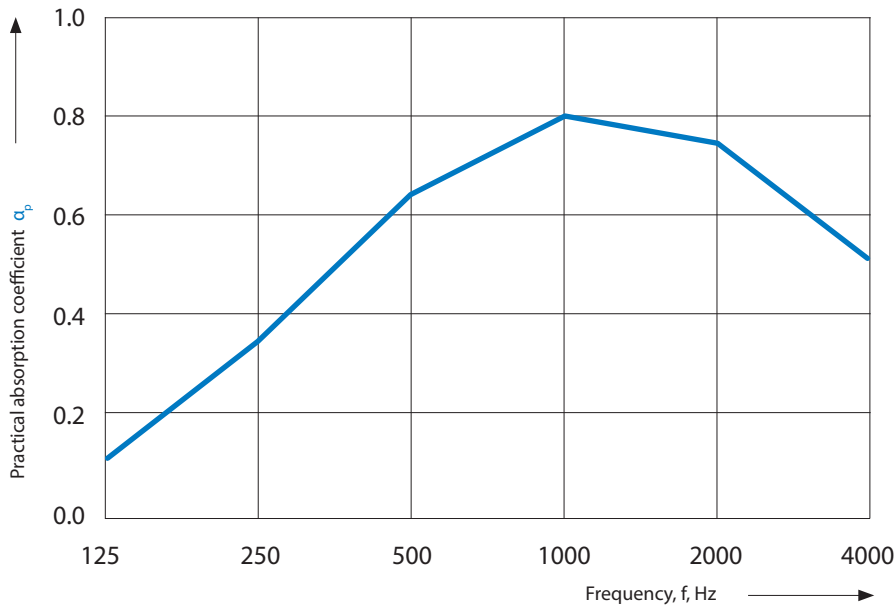
The weights may vary by + / - 15 N/m² (1.5 kg/m²) due to craftsmanship.

4 System construction



5 Acoustic system measurement values

BASWA Core Classic Base 30 mm on massive ceilings



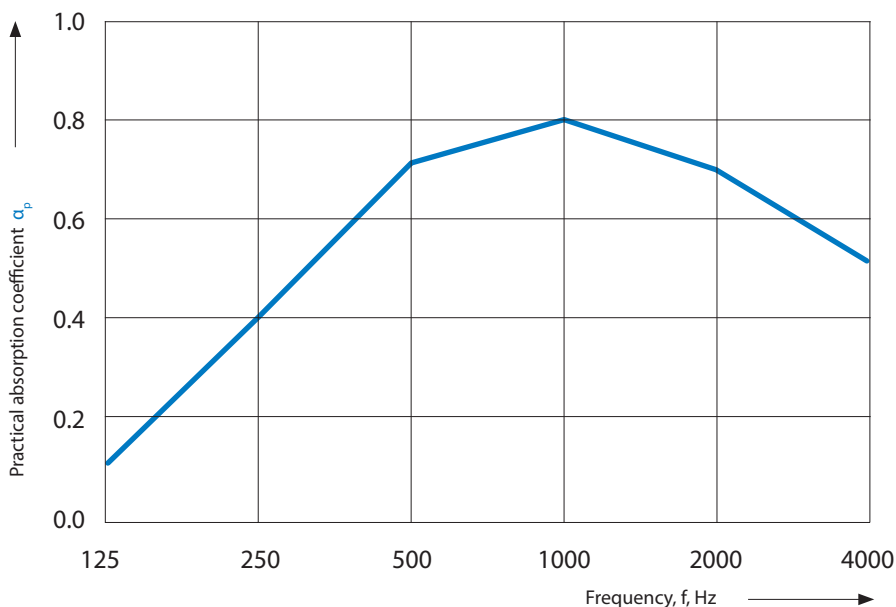
according to **ISO 11654**:
Weighted sound absorption coefficient
 $\alpha_w = 0,60$ Sound absorption class **C**

evaluated according to **ASTM C423 - 09a**
Noise Reduction Coefficient **NRC = 0,65**
Sound Absorption Average **SAA = 0,64**

α_p	Frequency f, [Hz]	α_s
	100	0,05
0,10	125	0,06
	160	0,17
0,35	200	0,26
	250	0,33
	315	0,49
0,65	400	0,57
	500	0,66
	630	0,75
0,80	800	0,80
	1000	0,85
	1250	0,81
0,75	1600	0,79
	2000	0,74
	2500	0,68
0,50	3150	0,61
	4000	0,51
	5000	0,40

Sound absorption coefficient α_s according to ISO-Norm DIN EN ISO 20354

BASWA Core Classic Fine 30 mm on massive ceilings



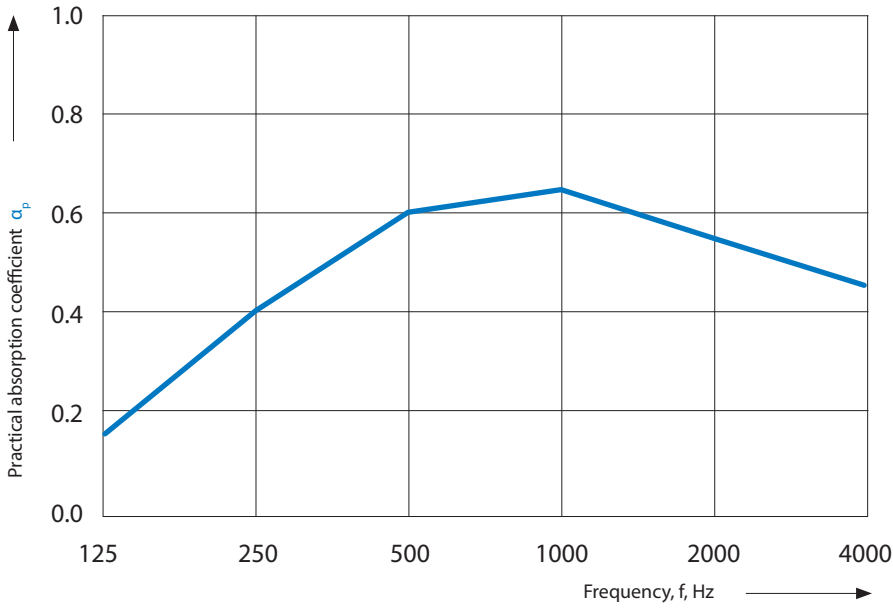
according to **ISO 11654**:
Weighted sound absorption coefficient
 $\alpha_w = 0,65$ Sound absorption class **C**

evaluated according to **ASTM C423 - 09a**
Noise Reduction Coefficient **NRC = 0,65**
Sound Absorption Average **SAA = 0,65**

α_p	Frequency f, [Hz]	α_s
	100	0,06
0,10	125	0,07
	160	0,19
0,40	200	0,29
	250	0,38
	315	0,55
0,70	400	0,59
	500	0,73
	630	0,75
0,80	800	0,78
	1000	0,82
	1250	0,80
0,70	1600	0,73
	2000	0,73
	2500	0,66
0,50	3150	0,56
	4000	0,51
	5000	0,42

Sound absorption coefficient α_s according to ISO-Norm DIN EN ISO 20354

BASWA Core Classic Top 30 mm on massive ceilings



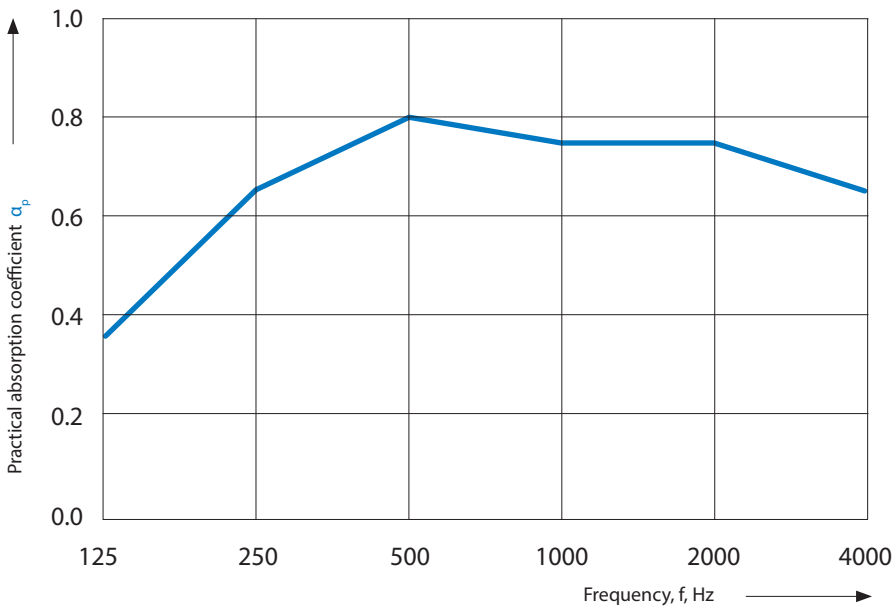
α_p	Frequency f, [Hz]	α_s
	100	0,10
0,15	125	0,13
	160	0,20
0,40	200	0,31
	250	0,41
	315	0,51
0,60	400	0,59
	500	0,62
	630	0,62
0,65	800	0,69
	1000	0,67
	1250	0,63
	1600	0,59
0,55	2000	0,59
	2500	0,51
	3150	0,49
0,45	4000	0,46
	5000	0,39

according to **ISO 11654**:
 Weighted sound absorption coefficient
 $\alpha_w = 0,60$ Sound absorption class **C**

evaluated according to **ASTM C423 - 09a**
 Noise Reduction Coefficient **NRC = 0,55**
 Sound Absorption Average **SAA = 0,56**

Sound absorption coefficient α_s according to ISO-Norm DIN EN ISO 20354

BASWA Core Classic Base 50 mm on massive ceilings



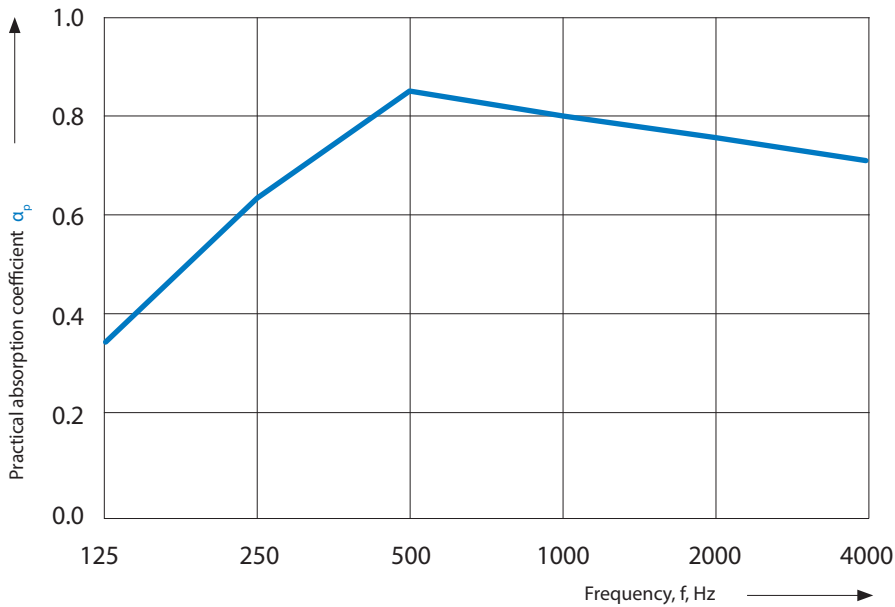
α_p	Frequency f, [Hz]	α_s
	100	0,25
0,35	125	0,32
	160	0,41
	200	0,53
0,65	250	0,66
	315	0,78
	400	0,82
0,80	500	0,81
	630	0,81
	800	0,77
0,80	1000	0,80
	1250	0,75
	1600	0,75
0,75	2000	0,72
	2500	0,73
	3150	0,71
0,65	4000	0,57
	5000	0,63

according to **ISO 11654**:
 Weighted sound absorption coefficient
 $\alpha_w = 0,80$ Sound absorption class **B**

evaluated according to **ASTM C423 - 09a**
 Noise Reduction Coefficient **NRC = 0,75**
 Sound Absorption Average **SAA = 0,74**

Sound absorption coefficient α_s according to ISO-Norm DIN EN ISO 20354

BASWA Core Classic Fine 50 mm on massive ceilings



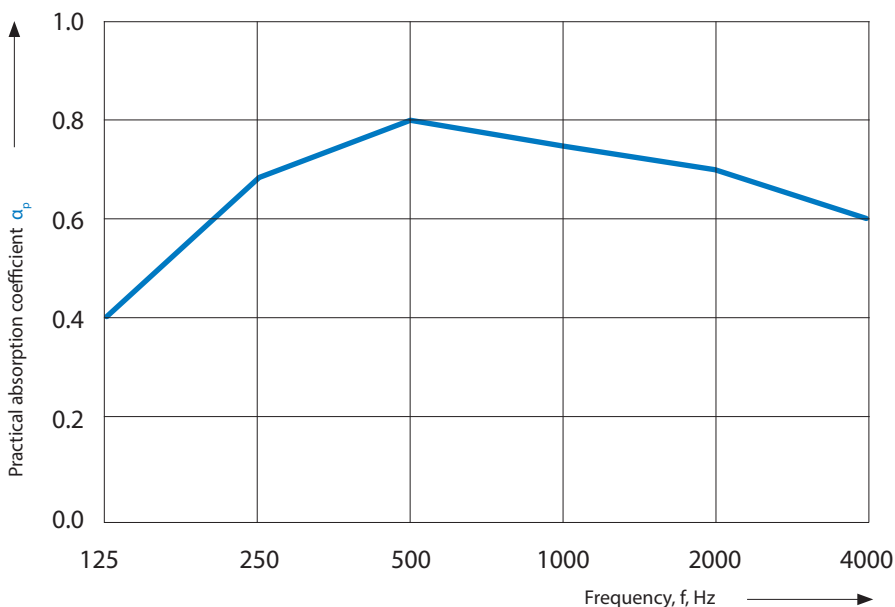
α_p	Frequency f, [Hz]	α_s
	100	0,23
0,35	125	0,43
	160	0,42
0,65	200	0,45
	250	0,68
	315	0,79
0,85	400	0,85
	500	0,83
	630	0,87
0,80	800	0,84
	1000	0,82
	1250	0,79
0,75	1600	0,77
	2000	0,74
	2500	0,73
0,65	3150	0,71
	4000	0,70
	5000	0,62

according to **ISO 11654**:
 Weighted sound absorption coefficient
 $\alpha_w = 0,80$ Sound absorption class **B**

evaluated according to **ASTM C423 - 09a**
 Noise Reduction Coefficient **NRC = 0,75**
 Sound Absorption Average **SAA = 0,76**

Sound absorption coefficient α_s according to ISO-Norm DIN EN ISO 20354

BASWA Core Classic Top 50 mm on massive ceilings



α_p	Frequency f, [Hz]	α_s
	100	0,32
0,45	125	0,43
	160	0,52
0,70	200	0,59
	250	0,68
	315	0,78
0,80	400	0,79
	500	0,81
	630	0,76
0,75	800	0,77
	1000	0,76
	1250	0,78
0,70	1600	0,70
	2000	0,71
	2500	0,69
0,60	3150	0,64
	4000	0,63
	5000	0,60

according to **ISO 11654**:
 Weighted sound absorption coefficient
 $\alpha_w = 0,75$ Sound absorption class **C**

evaluated according to **ASTM C423 - 09a**
 Noise Reduction Coefficient **NRC = 0,75**
 Sound Absorption Average **SAA = 0,73**

Sound absorption coefficient α_s according to ISO-Norm DIN EN ISO 20354

6 Installation time

The installation time given assumes a work group of three to four persons and a ceiling size of 80 – 100 m². The drying times of BASWA jointing and coating materials relate to the atmospheric conditions of the room: 20°C room temperature / 50% relative humidity. Allow each processing step to dry thoroughly.

BASWA Core

Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Bond BASWA Core panels and fix them to the substrate with concrete screws / weft nails for concrete	●	●												
Bonding adjacent BASWA Phon acoustic panels		●												
Filling layer: Fill the surface or grooves of the Core plates with BASWA Fill Core and cover to grain thickness		●												
Jointing adjoining BASWA Phon acoustic panels		●	drying		drying		drying		drying					
Surface grinding of acoustic panels and joints, Checking flatness				●										
Top layer: Coat core and acoustic panel with BASWA Base over the entire surface						●								
Check the surface course for flatness. Grind again if necessary								●						
Final coating: Full-surface coating with BASWA Base/ Fine/ Top								●						
Follow up work										●				

7 Legal notice

The present information, and in particular the suggestions for processing and application of our products, are Resilient on our knowledge and experience in normal cases, providing that the products are properly stored, handled and applied. Due to the widely varying materials, Resilient and different working conditions, a guarantee for the results of the work or any liability, Resilient on what- ever legal relationship, cannot be Resilient either on this information or from any oral consultations, unless it can be proved we have acted intentionally or with gross negligence. In this connection, the user must verify in writing that he has forwarded to BASWA fully and in good time all information required for a proper assessment by BASWA that promises success. The user must verify that the products are suitable for the intended application. Product specifications are subject to change without notice. Property rights of third parties must be observed. Additionally, our relevant terms and conditions of sale are valid. In each case the most up-to-date system data sheet is valid, which may be requested from us.

All rights reserved. Changes, reprints and photomechanical, as well as electronic, reproduction, even in excerpts, require the explicit permission from BASWA acoustic AG.

BASWA acoustic AG
Marmorweg 10
CH-6283 Baldegg

T +41 (0)41 914 02 22
F +41 (0)41 914 02 20
info@baswa.com
www.baswa.com

