

HAMMERFOAM

Noise Absorbent Page 1 (2)

Complete system for mounting on a bridge or wall along a road or railway. The system is based on a fully assembled Ground-2 or Bridge-2 Hammerglass solution and is supplemented with a highly absorbent mat that clips onto the Hammerglass panel. The Hammerfoam is turned toward the track side of the railway, or the road side along roads. The vandal-resistant Hammerglass panel is situated on the other side of the screen and also sits about 200 mm into the ground.

Hammerfoam is fire resistant, UV resistant and durable. It is resistant to chemicals and high pressure washers for the clean-up of graffiti. Hammerfoam does not absorb water.

Design and installation

Bring us into your discussions at the idea stage. Our designers will prepare drawings and offer suggestions for functional solutions. We will be happy to provide tenders for complete projects: Made-to-measure Hammerglass, posts, fixing systems and installation.

Draft regulatory text

“Noise barriers shall be CE-marked and constructed in 12 mm chemical-resistant (must withstand acetone), hard-coated polycarbonate offering at least 99.96% UV protection, type Hammerglass, mounted on hot-dip galvanised posts, type Hammerglass Ground-2. As noise absorbent, 50 mm Hammerfoam in height 1200 mm, shall be used.”

Technical specifications		
Max width Ground 2	2000 mm	
Max height (at width 2000 mm)	6000 mm	
Hammerfoam thickness	50 mm	
Hammerfoam height	Standard 1200 mm	
Hammerglass thickness	12 mm (10, 15, 17 mm)	
Fire characteristics DIN 4102	Klass B1	
Fire characteristics EN 13501-1	Klass B, S1-S2, d0	
Noise reduction class	B3 (HmG 12 mm)	
Noise reduction Hammerglass	12 mm	34 dBRw
Noise reduction Hammerglass	12 mm	30 DL _R
Noise reduction Hammerglass	15 mm	35 dBRw
Noise reduction Hammerglass	17 mm	36 dBRw
Noise reduction HmG+Hammerfoam	12+55 mm	37 dBRw
Noise reduction HmG+Hammerfoam	12+55 mm	31 DL _R
Noise absorption Hammerfoam	See next page	



The measurements were created with Hammerfoam separately - not in combination with Hammerglass. So, in addition to the absorption, you also get the reflective effect of a 12 mm Hammerglass panel (34 dBRw).

Project: Lab test	Surrounding: Acoustically controlled room
Date: 2013-05-01	Test method: dB measurements (lab test)
Materials: 50 mm Hammerfoam	Audio Source: Pink noise
By: ABJ, SP in Borås, Sweden	Measuring equipment: Sound Level Meters, CR: 160

Results: Sound absorption class: **A**
Balanced sound absorption coefficient: $\alpha_w = 0,9$
Summary value: $DL\alpha = 7$

	dB (without Hammerfoam)	dB (with Hammerfoam)	R (decrease)
LAeq:	86,6 dB	76,5 dB	10,1 dB
LCeq:	90,4 dB	82,8 dB	7,6 dB

LAeq: Average noise exposure over an 8-hour workday (within the human ear area)
LCeq: Same as LAeq, but the calculation is performed in a wider Hz range

Absorption measurement
The test was performed in accordance with UNI EN ISO dated 354:2003 01/12/2003. Acoustic measurement of sound absorption in a resonance controlled room.

Hz/a	Hammerfoam (50 mm)
100	0,1300
125	0,1600
160	0,2800
200	0,4000
250	0,6900
315	1,1300
400	1,0100
500	0,9900
630	1,0300
800	1,1200
1 000	1,0900
1 250	1,0700
1 600	1,0200
2 000	1,0900
2 500	1,0500
3 150	0,9700
4 000	0,9100
5 000	0,8900

Freq (Hz)	dB without Hammerfoam (100 cm)	dB with Hammerfoam (100 cm)	Decrease Hz area (100 cm)
125	78,4 dB	73,3 dB	5,1 dB
250	88,0 dB	81,4 dB	6,6 dB
500	83,7 dB	74,0 dB	9,7 dB
1 000	73,2 dB	65,0 dB	8,2 dB
2 000	78,6 dB	68,3 dB	10,3 dB
4 000	78,8 dB	62,0 dB	16,8 dB
8 000	77,2 dB	39,6 dB	37,6 dB
16 000	66,5 dB	35,9 dB	30,6 dB

Decibel is a logarithmic unit of sound pressure level

- A change in the sound pressure level by 1 dB is audible
- When the noise level changes by 3 dB, damage to the ear is doubled or halved
- Only when the noise changes by 10 dB will you experience the volume as doubled or halved

