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Zulassung neuer Baustoffe, Bauteile und Bauarten
Forschung, Entwicklung, Demonstration und Beratung auf den Gebieten der Bauphysik

Institutsleitung
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Supplement to P-BA 260/2012e

Sound absorption coefficient of coated mineral wool boards in the reverberation room acc. to DIN EN ISO 354: 2003 and DIN EN ISO 11 654: 1997, Noise Reduction Coefficient (NRC) and Sound Absorption Average (SAA) acc. to ASTM C423 - 09a

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The sound absorption coefficient of the acoustic boards "Sonaboard" made of mineral wool with different coverings specified in P-BA 260/2012e (test objects S 10525-10, -11, -12, -13), was measured on October 10 + 11, 2012 according to DIN EN ISO 354: 2003.

The determination of the **weighted sound absorption coefficient α_w** was been carried out according to DIN EN ISO 11654: 2006 with the following results:

version 1 (S 10525-13):	$\alpha_w = 0.70$ (MH)	sound absorber class: C;
version 2 (S 10525-12):	$\alpha_w = 0.85$	sound absorber class: B;
version 3 (S 10525-11):	$\alpha_w = 0.95$	sound absorber class: A;
version 4 (S 10525-10):	$\alpha_w = 0.95$	sound absorber class: A.

The **noise reduction coefficient NRC** according to ASTM C423 - 09a is the average of the sound absorption coefficients for 250 Hz, 500 Hz, 1000 Hz und 2000 Hz rounded off to the nearest multiple of 0.05:

version 1: NRC = 0.75;
version 2: NRC = 0.85;
version 3: NRC = 0.90;
version 4: NRC = 0.95.

The **sound absorption average SAA** according to ASTM C423 - 09a corresponds to the arithmetic average of the one-third octave sound absorption coefficient values α_i for the twelve one-third octave frequency bands from 200 to 2 500 Hz rounded off to the nearest multiple of 0.01:

version 1: SAA = 0.76;
version 2: SAA = 0.84;
version 3: SAA = 0.89;
version 4: SAA = 0.91.

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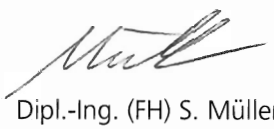
Stuttgart, May 29, 2013
SMu/Be

Responsible engineer:



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