

Sound absorption determined in impedance tubes according to ISO 10534-2 (1998) and expressed as Noise Reduction Coefficient (NRC) which is the arithmetic average of the absorption coefficients for a specific material and mounting condition determined at the one octave band center frequencies of 250, 500, 1000 and 2000 Hz. Also, air flow resistance was measured according to ISO 9053.

NRC Ratings can range from 0 (indicating a perfectly reflective material) to 1 (indicating a perfectly absorptive material). One way to look at NRC ratings is to see them as a percentage of sound that comes in contact with a sound absorption material and are not reflected back into the room. For example, a Noise Reduction Coefficient of 0.7 would indicate that 70% of sound waves are absorbed by the material. Materials can be classified based on their absorption behavior.

Sound absorption class (according EN ISO 11654)	α_w – waarde (according ISO 354)	Absorption class (according VDI 3755/2000)	NRC
A	0,90; 0,95; 1,00	highest absorption	$NRC \geq 0,75$
B	0,80; 0,85	highest absorption	$NRC \geq 0,75$
C	0,60; 0,65; 0,70; 0,75	high absorption	$0,5 \leq NRC < 0,75$
D	0,30; 0,35; 0,40; 0,45; 0,50; 0,55	absorption	$0,5 \leq NRC < 0,75$
E	0,15; 0,20; 0,25	low absorption	$0,25 \leq NRC < 0,5$
No class	0,05; 0,10	reflection	$NRC < 0,25$

