

Supplementary Tables

Table S1. Density, compressive strength, and open void ratio of the acoustic barrier products.

	Density (ρ , g/cm ³)	Compressive Strength (R_c , MPa)	Open Void Ratio (VR, %)
MS-C	1.02	1.1	42
MS-M	1.16	1.9	36
MS-F	1.28	3.8	18
CC	1.73	4.0	26

Abbreviation: CC, coarse porous concrete.

Table S2. The sound absorption coefficients at the main frequencies and the noise reduction coefficients (NRC) of the three noise barrier products.

Main frequency (Hz)	Sound Absorption Coefficient			
	MS-C	MS-M	MS-F	CC
100	0.15	0.16	0.07	0.00
125	0.10	0.06	0.04	0.00
160	0.00	0.00	0.09	0.00
200	0.12	0.10	0.02	0.01
250	0.05	0.05	0.05	0.01
315	0.07	0.04	0.06	0.05
400	0.09	0.04	0.02	0.10
500	0.15	0.06	0.02	0.18
630	0.26	0.10	0.04	0.38
800	0.50	0.17	0.06	0.64
1000	0.83	0.32	0.08	0.56
1250	0.84	0.71	0.07	0.39
1600	0.48	0.54	0.08	0.34
2000	0.33	0.30	0.12	0.32
2500	0.28	0.24	0.13	0.36
3150	0.31	0.24	0.06	0.49
4000	0.89	0.90	0.10	0.38
5000	0.44	0.24	0.14	0.45
NRC	0.34	0.18	0.07	0.27

Abbreviation: CC, coarse porous concrete.