Single Stud Wall with a Single Layer of 13 mm Fiberock both sides and with cavity insulation.

Airborne sound reduction indices according to ISO 140-3
Laboratory measurements of airborne sound insulation of building elements

Date of test: 23-Sep-03
Test rooms: A & C

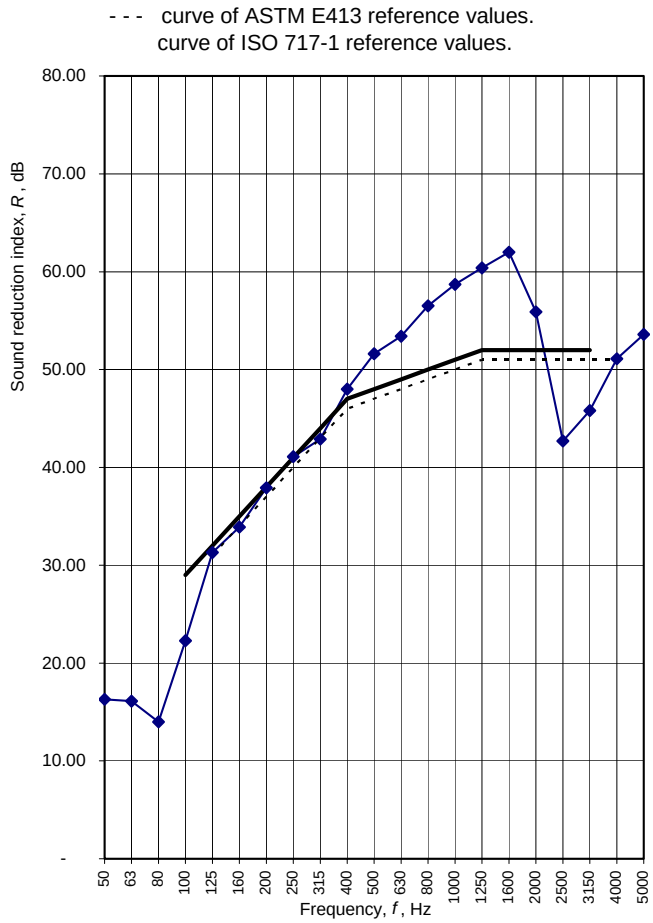
Description and identification of the test specimen and test arrangement:
13 mm Powerscape® Rocklining on both sides of single steel frame with 92 by 0.55 mm studs at 610 mm centres with R1.8 cavity insulation

Test specimen was installed by client.

Area *S* of test specimen: 11.93 m^2
Mass per unit area: kg/m^2
Air Temp in test room: 18 °C
Air Humidity in test rooms: 56 %
Source room volume: 208 m^3
Receiving room volume: 202 m^3

Frequency *f* Hz	*R* One-third octave dB
50	16.3
63	16.1
80	14.0
100	**22.3**
125	**31.3**
160	**33.9**
200	**37.9**
250	**41.1**
315	**42.9**
400	**48.0**
500	**51.6**
630	**53.4**
800	**56.5**
1000	**58.7**
1250	**60.4**
1600	**62.0**
2000	**55.9**
2500	**42.7**
3150	**45.8**
4000	**51.1**
5000	53.6

Notes: #N/A = Value not available. **Bold** values are used to calculate STC and R_w.



Rating according to ISO 717-1

R_w **(*C*;*C*$_{tr}$) =** 48 (-2;-7) dB

$C_{50\text{-}3150}$ = -5 dB	$C_{50\text{-}5000}$ = -4 dB	$C_{100\text{-}5000}$ = -1 dB
$C_{tr,50\text{-}3150}$ = -16 dB	$C_{tr,50\text{-}5000}$ = -16 dB	$C_{tr,100\text{-}5000}$ = -7 dB

Rating according to ASTM E413 -87

Sound Transmission Class = 47 dB

Evaluation based on laboratory measurement results obtained by an engineering method.