Fraunhofer-Institut für Bauphysik

enclosure no. 1
June 13, 2003

costumer:	Ecophon AB, Sweden
object:	normalized sound level difference $D_{n,c}$ of a suspended ceiling (S 9272-01)
place of measurement:	Fraunhofer Institute of Building Physics, Stuttgart, Germany
date of measurement:	May 13, 2003
short description:	suspended ceiling, identification of manufacturer: „Combison Duo A“, consisting of 13 mm gypsum board, 40 mm mineral wool, approx. 1 mm adhesive layer inbetween, size of the tiles: 600 mm x 600 mm, surface weight of the ceiling: 12.1 kg/m².
test conditions:	air temperature: 19 °C relative humidity: 39 %
dimensions of the rooms:	room 1: (L x B x H) 5.83 m x 4.00 m x 3.00 m; V = 69.8 m³ room 2: (L x B x H) 4.69 m x 4.00 m x 3.00 m; V = 56.2 m³
measuring method:	measurement according to DIN EN 20 140-9: 1993 cavity height 650 mm
results:	normalized sound level difference of the suspended ceiling (averaged over both measurement directions): $D_{n,c,w}$ (C; C_{tr}; $C_{100\text{-}5000}$; $C_{tr,\ 100\text{-}5000}$) = 43 (-1; -6; 0; -6) dB

f [Hz]	$D_{n,c}$ [dB]
100	23,1
125	26,9
160	26,2
200	28,2
250	30,3
315	33,2
400	38,6
500	43,5
630	46,9
800	50,5
1000	53,8
1250	58,0
1600	60,7
2000	63,3
2500	66,3
3150	66,3
4000	68,5
5000	70,7