

The information contained in this report is not intended to convey the complete and detailed fixing and/or application requirements of British Gypsum or other supplier's materials. For full specification details, please consult the latest relevant Company trade literature

Acoustics Test Report Number 1518 Date 04/07/90

LABORATORY AIRBORNE SOUND INSULATION  
MEASUREMENTS ON A 178mm STAGGERED STUD  
PARTITION WITH 25mm GYPGLAS 1200 IN THE CAVITY.

Test carried out for

British Gypsum Ltd.  
Marketing Dept.

  
Project Manager (Acoustics)



TESTING  
No. 0296



British Gypsum Limited,  
Research & Development Department,  
East Leake, Loughborough, Leics. LE12 6JT, England.

British Gypsum Limited registered in England  
(209091, registered office: Ruddington Hall, Ruddington,  
Nottingham) is a subsidiary of, and trades exclusively  
as an agent for, BPB United Kingdom Limited,  
Ruddington Hall, Ruddington, Nottingham.

# ACOUSTIC TEST REPORT



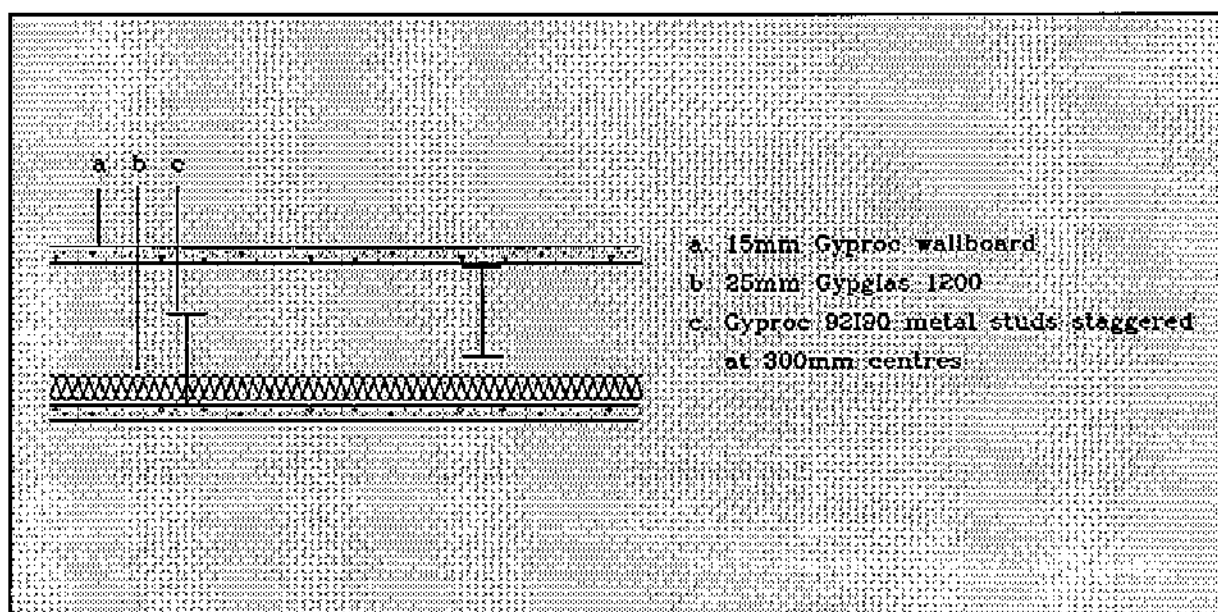
Test for: British Gypsum Ltd, Marketing Department.

Laboratory Test Code = H422.12

Test Date = 14 June 1990

## LABORATORY AIRBORNE SOUND INSULATION MEASUREMENTS ON A 178mm STAGGERED STUD PARTITION WITH 25mm GYPGLAS 1200 IN THE CAVITY.

**Description:** Gyproc 148C55 channel screw fixed to the head and base of the aperture at 600mm centres. Gyproc 146S55 stud screw fixed to the sides of the aperture at 600mm centres. Gyproc 92I90 stud located each side of the channel at 600mm centres, staggered by 300mm and held in place by I stud retaining clips. 25mm Gypglas 1200 ( $0.35 \text{ kg/m}^2$ ) placed in the cavity. 15mm Gyproc wallboard ( $12.83 \text{ kg/m}^2$ ) screw fixed to each side of the metal stud frame. Joints of the 15mm Gyproc wallboard filled and the perimeter sealed with Gyproc Sealant.



**RESULT:**  $R_w = 53 \text{ dB}$        $STC = 54$        $dB(A) = 51.4$

Tested in accordance with BS 2750:Part 3:1980, ISO 140/111-1978.

### Test Data

1/3 Oct.	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Hz
R dB	27	30	40	42	44	49	53	59	60	64	66	67	65	59	53	52	58	62	

**Test Method:** the test specimen (2.4m x 3.6m) is constructed in a wall dividing two reverberant rooms of approximately  $109\text{m}^2$ . The accuracy of the test method conforms to BS 2750:Part 2:1980. Further information is available from the Acoustics laboratory.

**Note:** This laboratory test report is not a guarantee of on site performance which may be affected by associated structure when the construction is incorporated within a building. In addition, to achieve optimum sound insulation, all air paths must be sealed.



Research & Development Department  
East Leake  
Loughborough  
Leicestershire LE12 6JT

TESTING  
No. 0296

*P. Royle*  
P. ROYLE  
Project Manager (Acoustics)



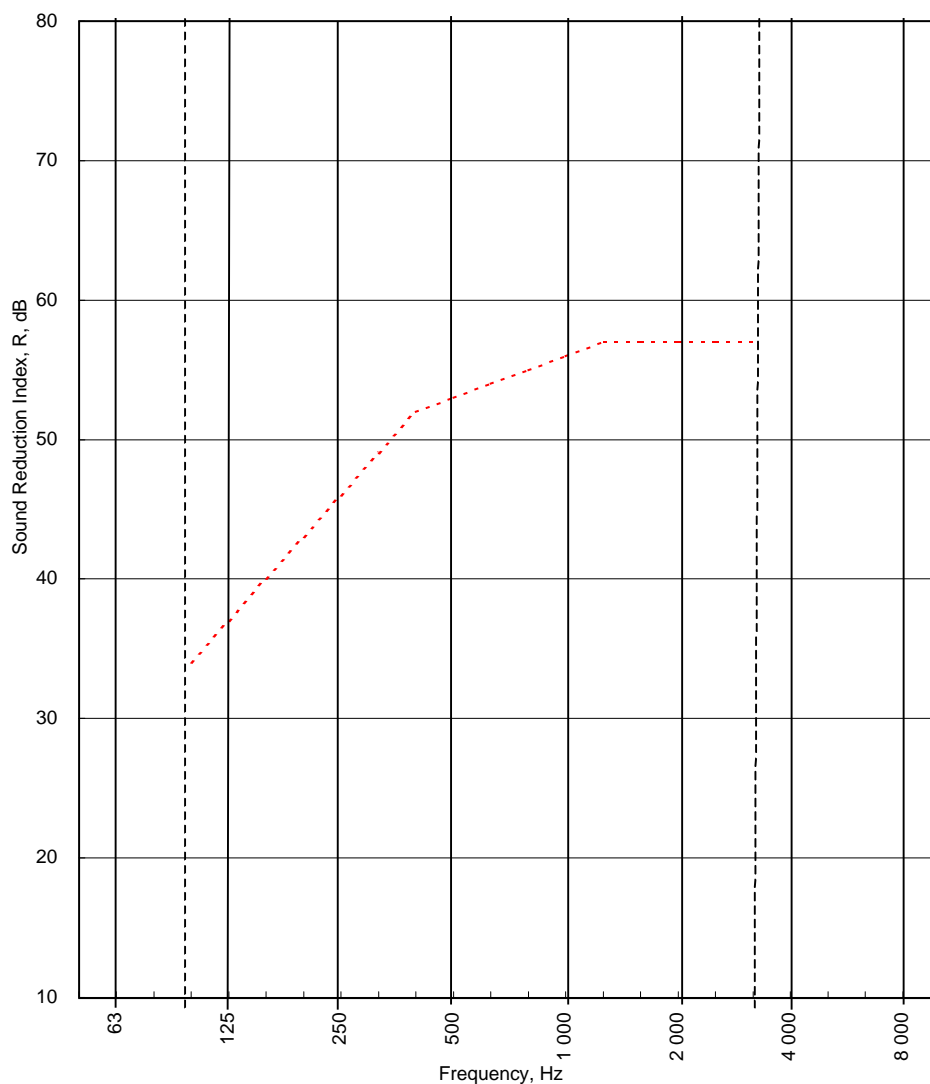
Addendum To BGATR 1518 Ctr CALCULATION

Freq Hz	Source dB	Rec. (uc) dB	Bgrnd dB	Rec. (corr) dB	Rev.time Sec	Corr. dB	R dB	U.Dev. dB	R 1/1Oct dB
50									
63									
80									
100							27.0	7.0	
125							30.0	7.0	
160							40.0		
200							42.0	1.0	
250							44.0	2.0	
315							49.0		
400							53.0		
500							59.0		
630							60.0		
800							64.0		
1 000							66.0		
1 250							67.0		
1 600							65.0		
2 000							59.0		
2 500							53.0	4.0	
3 150							52.0	5.0	
4 000									
5 000									
6 300									
8 000									
10 000									

Single Figure Ratings BS EN ISO 717-1: 1997	<b>Rw</b> dB <b>53</b>	<b>C</b> dB <b>-2</b>	<b>Ctr</b> dB <b>-9</b>	<b>Total U. Dev., dB</b>	<b>26</b>
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <b>Rw + Ctr = 44</b> </div>		<div style="border: 1px solid black; padding: 5px;">           Calculated By: _ Franklin Sanicharane             Checked By: _ Bob Allen             Test Standard: BS 2750: Part 3: 1980            Test Procedure: 2750/3 issue 4             Worksheet: ctr calculation.xls         </div>			

Test Code:
Test Date:

Freq. Hz	R dB
50	
63	
80	
100	27.0
125	30.0
160	40.0
200	42.0
250	44.0
315	49.0
400	53.0
500	59.0
630	60.0
800	64.0
1 000	66.0
1 250	67.0
1 600	65.0
2 000	59.0
2 500	53.0
3 150	52.0
4 000	
5 000	
6 300	
8 000	
10 000	



----- Curve of reference values (ISO 717-1)

Rating according to  
BS EN ISO 717-1:1997

**R<sub>w</sub> (C;C<sub>tr</sub>) = 53 (-2;-9) dB**

Max dev. dB at Hz

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

C<sub>50-3150</sub> = dB

C<sub>50-5000</sub> = dB

C<sub>100-5000</sub> = dB

C<sub>tr,50-3150</sub> = dB

C<sub>tr,50-5000</sub> = dB

C<sub>tr,100-5000</sub> = dB