Gold Bond Building Products
A National Gypsum Division
Research Center

ACOUSTICAL LABORATORIES

REPORT

NVLAP

The laboratory is accredited by NVLAP of the U.S. Department of Commerce as having the competence to perform specified tests in accordance with prescribed test methods and accreditation criteria.

SOUND TRANSMISSION LOSS TEST
NGC # 2875

Assignment 6 079 May 2, 1988

Tested For : Icynene Inc. Mississauga, Ontario Canada

Test Procedure : The sample was tested in accordance with the American Society for Testing and Materials (ASTM) Test Method E 90-83. The Sound Transmission Class (STC) was determined in accordance with ASTM E413.

Test Specimen : A general description of the construction is as follows:

A Wood Stud Partition was constructed. Nominal 2 inch by 4 inch wood members were used in this construction. The 14 foot long top and bottom plates were caulked and secured respectively to the ceiling and floor surfaces of the test opening. Nominal 2 inch by 4 inch wood studs were spaced 16 inches on centers. The termination studs were also caulked and attached to the sides of the test opening.

A single layer of Gold Bond 5/8 inch thick FSW-G Wallboard was screw attached to one side of the wood framework. The wallboard was attached using 1 inch long Type S screws spaced 12 inches o.c. The wallboard weight was 2.4 pounds per square foot.

At this point of construction the Icynene Inc.'s GOLDSEAL polyicynene micro-cellular plastic foam was sprayed to the interior of the partiton. The foam was trimmed to the 3 1/2 inch width of the wood studs. The measured density of the foam was .52 pounds per cubic foot.

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The remaining face of the framework was then covered using the same material and geometries as was the opposite face.

The test specimen measured 9 foot high by 14 foot long by 4 3/4 inches wide and weighed 6 pounds per square foot. The perimeter of the specimen was caulked to insure against acoustical leakage.

Test Results :

Test Frequency (in Hz)	Transmission Loss (in dB)
125	19
160	16
200	18
250	30
315	36
400	31
500	31
630	37
800	39
1000	42
1250	43
1600	43
2000	38
2500	38
3150	42
4000	46

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This measured data translates to a Sound Transmission Class (STC) of 37. A graphical representation of the data and the standard STC curve are given on Page 4 of this report.

Submitted By

A. E. Heuer 5/2/88

Andrew E. Heuer
Acoustical Project Engineer

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TEST # NGC 2875 STC-36

DATE 5/2/88 PROJECT # G 079

STUDS-2X4_TRACK 2X4" WOOD STUDS SPACED 16" O.C.

FACE MATERIALS SINGLE LAYER 5/8" FSW-G WALLBOARD (2400 POUNDS/MSF)

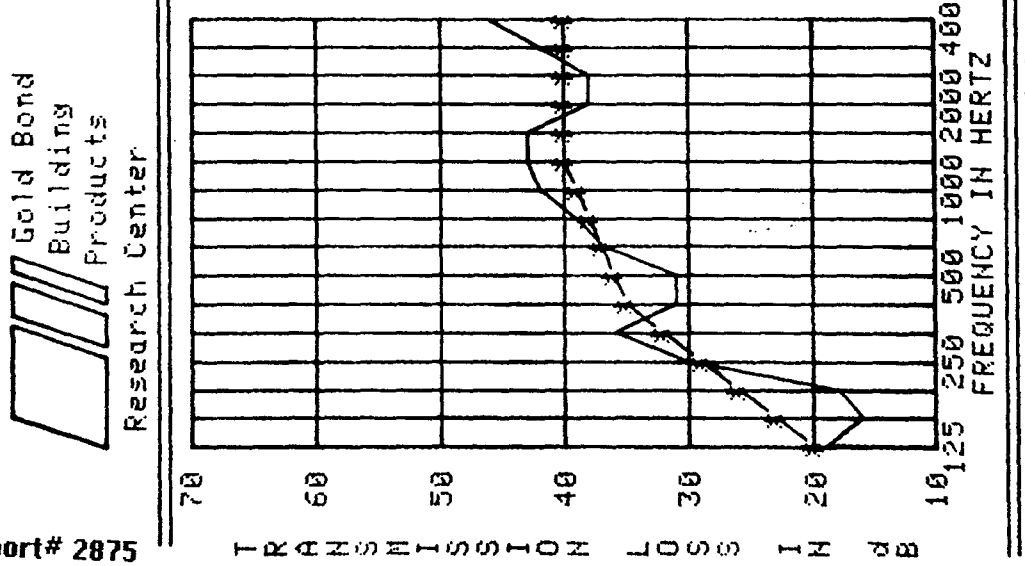
FASTENERS 1" TYPE S SCREWS 12" O.C.

INSULATION GOLDSEAL POLYICNENE FOAM

REMARKS

FREQ.,Hz	TL,dB	DEF.	UNC.,±dB
125	19	1	0.6
160	16	2	0.9
200	18	3	0.7
250	30	-	0.3
315	26	-	0.3
400	31	4	0.4
500	31	5	0.2
630	37	5	0.2
800	39	-	0.2
1000	42	-	0.1
1250	43	-	0.1
1600	43	-	0.1
2000	38	2	0.2
2500	38	2	0.2
3150	42	1	0.1
4000	46	-	0.2

WITNESSED BY



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