



# Acoustical Surfaces, Inc.

**SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS**

123 Columbia Court North • Suite 201 • Chaska, MN 55318  
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121

Email: [sales@acousticalsurfaces.com](mailto:sales@acousticalsurfaces.com)  
Visit our Website: [www.acousticalsurfaces.com](http://www.acousticalsurfaces.com)

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**We Identify and S.T.O.P. Your Noise Problems**



**Cedar Knolls**  
ACOUSTICAL LABORATORIES

9 Saddle Road, Cedar Knolls, New Jersey — 07927  
Phone: 201-539-6261

**SOUND TRANSMISSION LOSS TEST NO. 8204.16**  
**ON**  
**1 LB. DENSITY BARIUM LOADED VINYL**

## Introduction

The sound transmission loss of a partition in a specified frequency band is the ratio, expressed on the decibel scale, of the airborne sound power incident on the partition to the sound power transmitted by the partition and radiated on the other side. The ratio of two like quantities proportionable to power or energy is expressed on the decibel scale by multiplying its common logarithm by ten.

## Applicable Standards

Measurements were made in accordance with:

ASTM Designation: *E 90-75, Standard Method for LABORATORY MEASUREMENT OF AIRBORNE SOUND TRANSMISSION LOSS OF BUILDING PARTITIONS.*

Sound transmission class, STC, was determined in accordance with:

ASTM Designation: *E 413-73, Standard Classification for DETERMINATION OF SOUND TRANSMISSION CLASS.*

## Test Specimen

The test specimen was 8 ft. wide high patch of 0.10 in. thick vinyl sheet material. The material was submitted by Acoustical Surfaces, Inc. (ASI) and was identified as “1 lb. density barium loaded vinyl.” Two sheets of the material approximately 49 in. wide by 96 in long were stapled to a 2x4 wood frame in the 8 ft. wide by 8 ft. high test opening. The woodframe comprised a top member, a bottom member and three vertical members. The average weight of the material was 1.06 lb./ft<sup>2</sup>.

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### Test Results

The measured sound transmission loss of the test specimen at the preferred one third octave band center frequencies are tabulated on page three and shown graphically on page four.

Test performed by:

Felix Steckl  
Senior Laboratory Technician

Respectfully Submitted:

Richard M. Guernsey  
Director

Test No. 8204.16



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Sound Transmission Loss, *TL*, in dB *va*, Frequency in Hz

<u>Freq.</u>	<u>TL</u>	<u>Deficiencies</u>	<u>Freq.</u>	<u>TL</u>	<u>Deficiencies</u>
100	14		800	26	2
125	13		1000	28	1
160	13		1250	29	1
200	16		1600	31	
250	17	2	2000	33	
315	19	3	2500	35	
400	19	6	3150	37	
500	21	5	4000	40	
630	23	4	5000	42	

Sound Transmission class, *STC* 26

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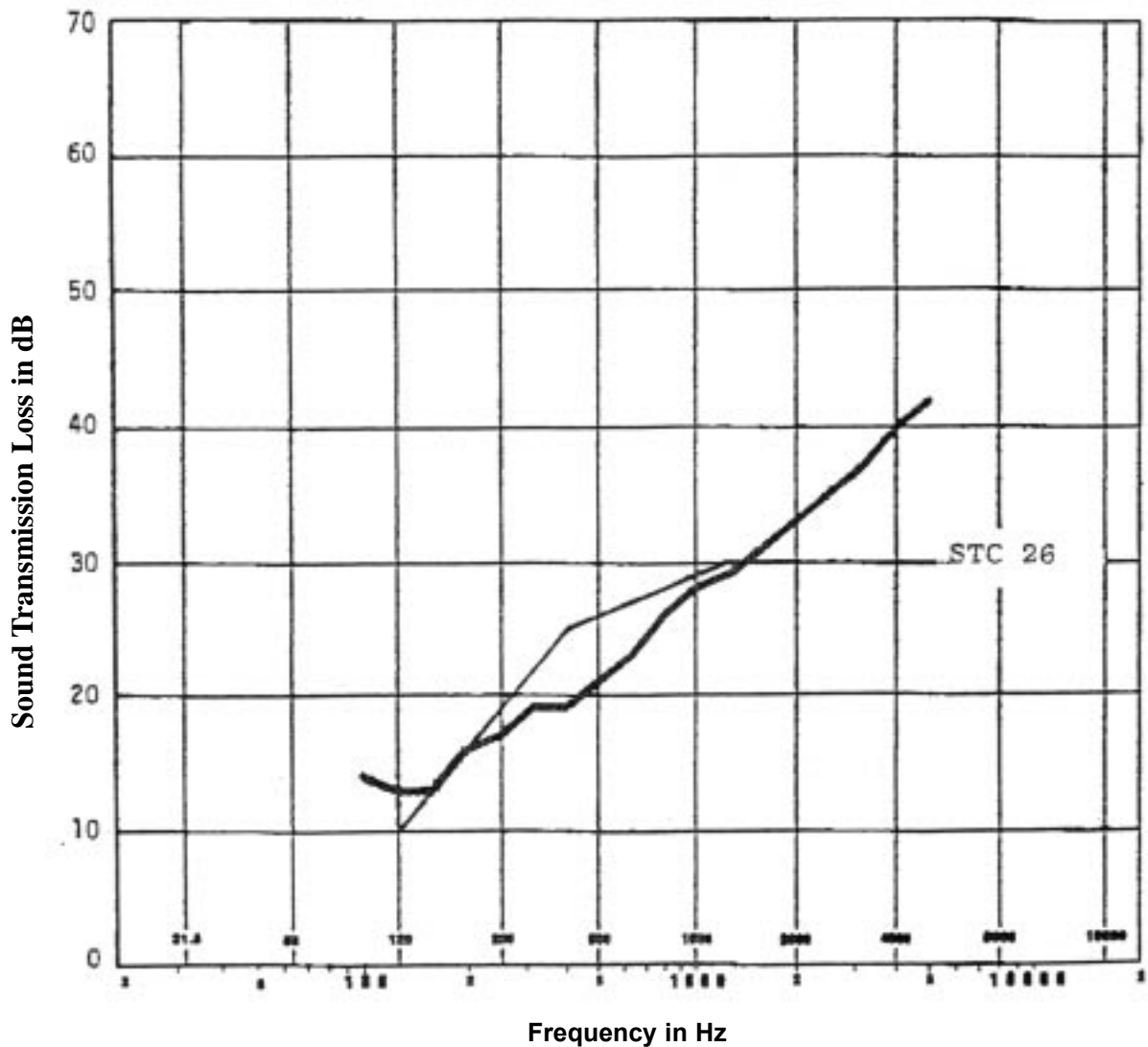
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1 lb. DENSITY BARIUM LOADED VINYL



Sound Transmission Loss of 1 lb. DENSITY LOADED BARIUM VINYL

Test No. 8204.16