



# 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***

## REPORT

### ETL TESTING LABORATORIES, INC.

INDUSTRIAL PARK

CORTLAND, NEW YORK 13045

Order No. 27221K

Date: March 7, 1984

REPORT NO. 454493

#### SOUND TRANSMISSION LOSS TEST AND CLASSIFICATION OF QUILTED BLANKETS

#### INTRODUCTION

This report gives the results of a Sound Transmission Loss test and the determination of the Sound Transmission Class on four United Process' Quilted Blankets.

#### AUTHORIZATION

Purchase Order No. 18233 dated September 10, 1981 from by Mr. Richard T. Mulcahy

#### TEST METHOD

The blankets were tested in accordance with American Society for Testing and Materials (ASTM) designation E90-75, "Standard Transmission Loss of Building Partitions", and classified in accordance with American Society for Testing and Materials designation ASTM E413-73, "Determination of Sound Transmission Class".

#### GENERAL

The sound-insulation property of a partition element if expressed in terms of the sound transmission loss. The procedure for determining this quantity is to mount (and perimeter seal) the test specimen as a partition between two reverberation rooms. Sound is introduced in one of the rooms (the source room) and measurements are made of the noise reduction between source and receiving room. The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

The purpose of the Sound Transmission Class (STC) is to provide a single figure rating that can be used for comparing the sound-insulating properties of partition elements used for general building design purposes. The higher the rating (STC) the greater the sound-insulating properties of the partition.



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## DESCRIPTION OF TEST SPECIMEN

### Specimen Number (1) BSC-31

Blanket designation BL-2F-200B was a nominal 4 feet wide by 9 feet high by 2 inches in thickness.

The quilt covering the center septum had an AGC facing on both sides with a diamond stitch pattern. The test specimen weighed 1.4 lbs./ft<sup>2</sup>.

### Specimen Number (2) BSC-25

Blanket designation BNL-2F-200 was a nominal 4 feet wide by 9 feet high by 2 inches in thickness.

The quilt covering the non-metallic barrier had an AGC facing on both sides with a diamond stitch pattern. The test specimen weighed 1.5 lbs./ft<sup>2</sup>.

### Specimen Number (3) QFA-10

Blanket designation AF-2F-200 was a nominal 4 feet wide by 9 feet high by 2 inches in thickness.

The quilt had an AGC facing on both sides with a diamond stitch pattern. The test specimen weighed 0.4 lbs./ft<sup>2</sup>.

### Specimen Number (4) BBC-13

Blanket designation 10R-1F-100 was a nominal 4 feet wide by 9 feet high by 1 inch in thickness.

The quilt had an AGC facing with a diamond stitch on one side and a 1000P reinforced vinyl facing on the other. The test specimen weighed 1.3 lbs./ft<sup>2</sup>.



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## RESULTS OF TEST

<u>Band No.</u>	<u>1/3 Octave Band center frequency Hz</u>	<u>Sound Transmission Loss in dB specimen number</u>			
		<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>
(1)	125	12	12	6	11
(2)	160	11	11	5	11
(3)	200	14	13	9	13
(4)	250	16	16	11	16
(5)	315	17	19	12	19
(6)	400	19	22	12	20
(7)	500	23	27	15	24
(8)	630	25	30	15	25
(9)	800	31	36	18	29
(10)	1000	33	40	20	30
(11)	1250	35	42	22	30
(12)	1600	37	44	24	32
(13)	2000	38	44	25	35
(14)	2500	38	44	27	35
(15)	3150	37	44	29	34
(16)	4000	39	43	32	35
Sound Transmission Class		<u>27</u>	<u>29</u>	<u>19</u>	<u>27</u>

## REMARKS

1. Aging Period None
2. Ambient Temperature 75°F
3. Relative Humidity 45%

Report Approved By:

Norman H. Bay, Manager  
Acoustical Division