



WESTERN ELECTRO - ACOUSTIC LABORATORY

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TESTING • CALIBRATION • RESEARCH

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SOUND TRANSMISSION LOSS TEST REPORT NO. TL08-582

CLIENT: **Ecolite Concrete**
2091 Los Palmas Dr. Suite E
Carlsbad, CA 92011

Page 1 of 2
12 September 2008

TEST DATE: 3 September 2008

INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*. Copies of the test standard are available at www.astm.org. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

DESCRIPTION OF TEST SPECIMEN

The test specimen was a model ICC AC282 5-1/2 inch Ecolite Concrete Panel with gypsum board. The panel was installed by sliding it completely into the test chamber opening and capturing it with screws on both sides. The specimen was sealed into the test chamber opening with a duct seal putty and latex caulking around entire perimeter on both sides. The frame consisted of 5-1/2 inch (140 mm) x 1-1/2 inch (38.1 mm) 16 gauge steel studs at 12 inches (305 mm) O.C. The concrete was poured into the frame using a mold that allowed the concrete to extend beyond the frame by approximately 1 inch (25.4 mm). The concrete was nominal 2 inches (51 mm) thick. According to the manufacturer:

The concrete was 80 lbs/ft³ (1281 kg/m³) density consisting of 50% cement and 50% flyash and lightweight aggregate. The concrete was poured into the frame with a 18 gauge expanded diamond lath (1/2" #18S) septum in the middle of the pour. The sample was cured for 28 days.

On the receiving room side, 3-1/2 inch (88.9 mm) thick R-13 unfaced fiberglass batts were installed in the stud space. New Dietrich single leg dogbone resilient channels were attached to the studs and oriented horizontally with the resilient leg above the screw leg at 24 inches (610 mm) O.C. The center of the top channel was 3 inches (76.2 mm) below the top of the wall and the center of the bottom channel was 3 inches (76.2 mm) above the bottom of the wall. USG 5/8 inch (15.9 mm) thick type X gypsum board was attached to the resilient channel with screws approximately 12 inches (305 mm) O.C. The gypsum board was oriented vertically. The joints and perimeter were sealed with a bead of caulk and metal foil tape. All screw heads were covered with metal foil tape. The net outside frame dimensions of the specimen were 96 inches (2.44 m) wide by 88 inches (2.24 m) high by 8 inches (203 mm) deep. The overall weight of the assembly was estimated to be 1660 lbs. (753 kg) for a calculated surface density of 28.3 lbs./ft² (138.2 kg/m²).

RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-58.

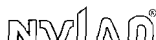
Approved:

Gary E. Mange
Laboratory Director

Respectfully submitted,
Western Electro-Acoustic Laboratory

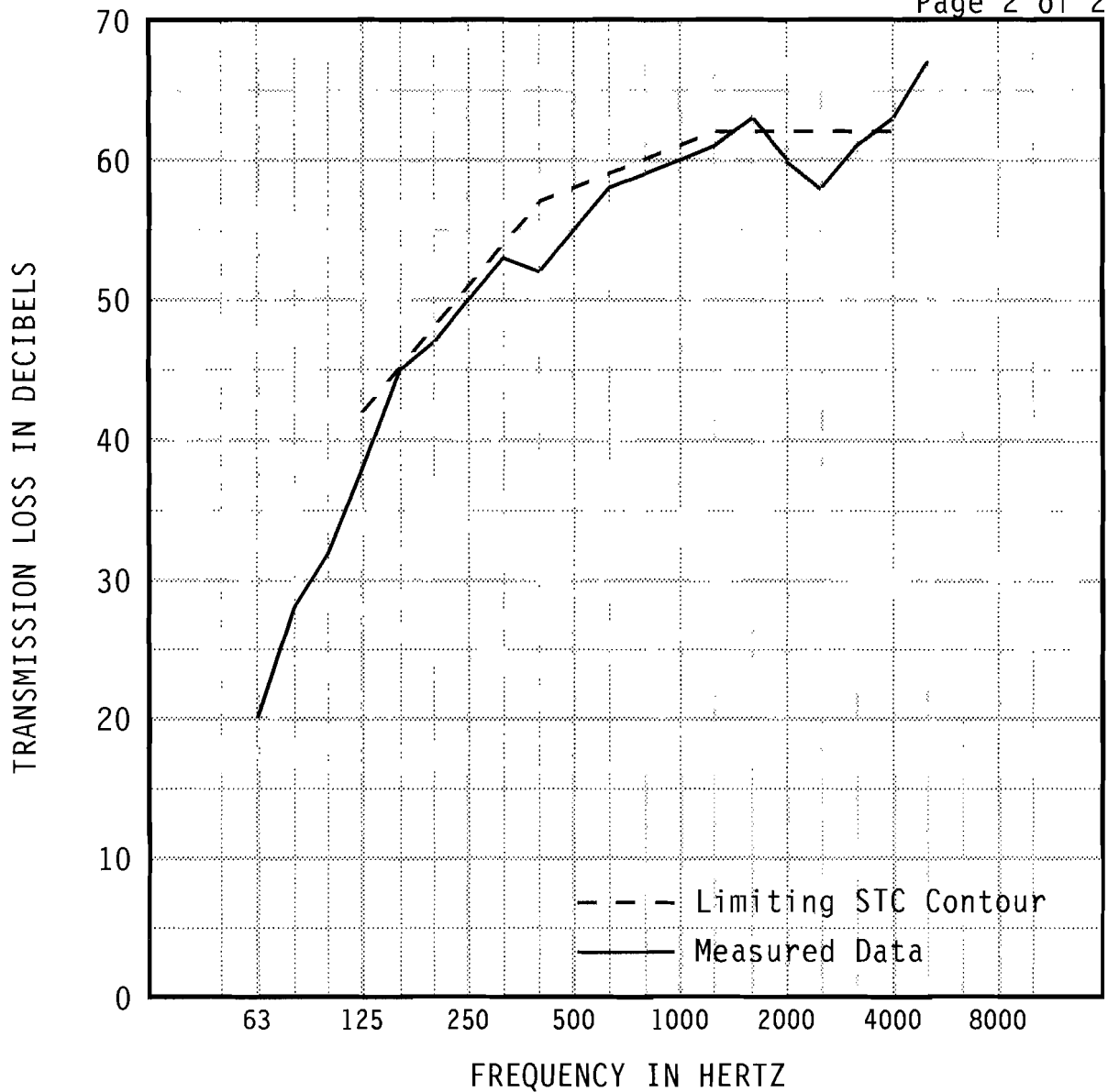
Raul Martinez
Acoustical Test Technician

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1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		20	28	32	38	45	47	50	53	52	55
95% Confidence in dB		1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
deficiencies					(4)	(0)	(1)	(1)	(1)	(5)	(3)
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		58	59	60	61	63	60	58	61	63	67
95% Confidence in dB		0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
deficiencies		(1)	(1)	(1)	(1)		(2)	(4)	(1)		

EWR	OITC	Specimen Area: 58.66 sq.ft. Temperature: 78.1 deg. F Relative Humidity: 43 % Test Date: 03 September 2008	STC
59	44		58
			(26)