



Standard Test Method for Objective Measurement of the Speech Privacy Provided by a Closed Room¹

This standard is issued under the fixed designation E2638; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

This test method is one of a set of standards for evaluating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room. A related method (Test Method E1130) deals with assessing speech privacy in open plan spaces.

1. Scope

1.1 This test method describes a test procedure for measuring the degree of speech privacy provided by a closed room, for conversations occurring within the room, and with potential eavesdroppers located outside the room.

1.2 The degree of speech privacy measured by this method is that due to the sound insulation of the room structure—the walls, floor, ceiling and any other elements of the room boundaries—and to the background noise at listening positions outside the closed the room.

1.3 Potential eavesdroppers are assumed to be unaided by electronic or electroacoustic equipment, and not touching the room boundaries. Determined efforts to eavesdrop are not addressed.

1.4 The method may be applied to any enclosed room, whether specifically intended to be protected against eavesdropping or not.

1.5 The method does not set criteria for adequate speech privacy. A non-mandatory appendix provides guidance on how the results of this test method may be used to estimate the probability of an eavesdropper being able to understand speech outside a closed room, and how to set criteria for such rooms.

1.6 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 *ASTM Standards:*²

C634 Terminology Relating to Building and Environmental Acoustics

E1130 Test Method for Objective Measurement of Speech Privacy in Open Plan Spaces Using Articulation Index

2.2 *ANSI Standards:*

S1.11 Specification for Octave-Band and Fractional-Octave-Band Analog and Digital Filters³

S1.43 Specifications for Integrating-Averaging Sound Level Meters³

3. Terminology

3.1 The following terms used in this test method have specific meanings that are defined in Terminology C634:

airborne sound	sound attenuation
average sound pressure level	sound isolation
background noise	sound level
decibel	sound pressure level
level	source room
octave band	white noise
pink noise	

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *receiving point*—a location outside the closed room under consideration where someone might accidentally overhear or deliberately listen to speech occurring within the room.

¹ This test method is under the jurisdiction of ASTM Committee E33 on Building and Environmental Acoustics and is the direct responsibility of Subcommittee E33.02 on Speech Privacy.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.