**Designation: ~~E989 – 06 (Reapproved 2012)~~ E989 – 18**

# Standard Classification for ~~Determination of Impact Insulation Class (IIC)~~Single-Number Metrics for Impact Noise[1]

This standard is issued under the fixed designation E989; 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.

## 1. Scope

1.1 This classification provides a method for determining a rating that can be used to compare the levels of impact noise generated by a standard tapping machine and transmitted through different floor-ceiling assemblies.

1.2 The name given to the rating is assigned by the test method that invokes this classification.

1.3 This classification is applicable only to one third octave band impact noise data obtained using the standard tapping machine described in Test Methods E492 and E1007.

1.4 Test methods that invoke this classification include:

1.4.1 *Test Method E492* —– the single-number rating is called impact insulation class (IIC).

1.4.2 *Test Method E1007* —– the single-number ~~rating is~~ratings are called ~~field~~apparent impact insulation class ~~(FIIC).~~(AIIC), impact sound rating (ISR), and normalized impact sound rating (NISR).

1.4.3 *Test Method E2179* – the single-number rating is called the change in impact insulation class (ΔIIC).

1.5 *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~~ safety, health, and ~~health~~environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

2.1 *ASTM Standards:*[2]

C634 Terminology Relating to Building and Environmental Acoustics

E492 Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine

E1007 Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures

E2179 Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors

[1] This classification is under the jurisdiction of ASTM Committee E33 on Building and Environmental Acoustics and is the direct responsibility of Subcommittee E33.10 on Structural Acoustics and Vibration.

Current edition approved ~~Sept. 1, 2012~~Nov. 1, 2018. Published ~~November 2012~~December 2018. Originally approved in 1984. Last previous edition approved in ~~2006~~2012 as ~~E989 – 06.~~E989 – 06 (2012). DOI: ~~10.1520/E0989-06R12.~~10.1520/E0989-18.

[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.