
TECHNICAL TERMINOLOGY IN THE FIELD OF ACOUSTICS

DB: Abbreviation for the sound pressure level measurement decibel. A decibel is 1/10 of the logarithmic ratio Bel.

Flanking: The situation whereby sound energy is transmitted into a receiving room by a path other than the building element being considered. For example, sound bypassing a tested floor system via a wall.

Impact Sound / Structure-Borne Sound: Sound energy travelling through a solid object, such as footsteps through floor.

ISO: Abbreviation for International Standards Organisation.

IIC: Impact Insulation Class, an American method for determining a single figure rating for transmission loss of impact sounds through a floor. In general the higher IIC the better the performance. The 1/3 octave range used is 125 to 4000 Hz.

FIC: Field Impact Isolation Class, measures impact noise on-site tested (field).

STC: Sound Transmission Class, An American method for determining a single figure rating for transmission loss of airborne sounds through a floor. In general the higher the STC the better the performance. The 1/3 octave range used is 125 to 4000 Hz.

Ln, w: Weighted normalised impact sound pressure level is the European single figure rating for transmission loss of impact sound through building elements. In general the lower the Ln,w the better the performance. The 1/3 octave range used is 100 to 3150Hz.

LnT,w: Weighted standardised impact sound pressure level.

Rw: Weighted sound Reduction Index is the European single figure rating for airborne reduction through building elements. In general, the higher the Rw the better the performance. The 1/3 octave range used for calculating Rw rating is 100 to 3150 Hz.

Comparing IIC (or Ln, w) ratings for different Regupol® Impact Sound Acoustic Underlay's is not possible without knowing the test condition, as these ratings, normally conducted in the field (FIC) are for the entire system not just the Regupol® Impact Sound Acoustic Underlay.

The only meaningful comparison is by subjecting the products to the same test conditions.

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| IIC Rating examples: | IIC45 – below BCA requirement | IIC55 – audible |
| | IIC50 – clearly audible | IIC65-75 – normal inaudible |

In Australia, there are two methods of rating the impact insulation of floors measured in a laboratory.

1. IIC or “impact Insulation Class” measured in accordance with American Standard E 492; or,
2. Ln,w or “weighted Normalised Impact Sound Pressure Level” measured in accordance with International standards ISO 140. A “spectrum adaption term” denoted as C1 may also be applied to de-rate floor performance at low frequencies. The resulting measurement term is denoted as Ln,w+C1 and is proposed in the BCA.

The Methodologies for the two tests described above are similar and generally the Ln,w can be obtained by subtracting the IIC value from 110. There are also corresponding test methods for rating the impact insulation of floors measured in situ, for example, in apartment buildings.