Sound is classified into two basic types

- **Airborne Noise** – talking, music, TV
- **Structure-Borne Noise** – impact floor noise commonly referred to as footfall noise, dragging furniture, dog walking, etc.

**STC (Sound Transmission Class)**

- A value for evaluating the performance of interior walls and the floor/ceiling assembly to stop or insulate airborne noise
- The higher the STC number the better the ability of the assembly to block airborne noise
- Weight & mass play a major factor in the overall STC rating, the heavier the structure the higher the STC ratings will be

**IIC (Impact Isolation Class)**

- A value for evaluating the performance of the floor/ceiling assembly from structure-borne noise
- Floor underlayments in general are lightweight and designed specifically for impact isolation (IIC)
- The higher the number the better the performance
- Weight & mass helps with low frequency performance and will help the IIC performance of an underlayment

*Note: The Δ IIC is a new ASTM test that measures the improvement in decibels. Example a Δ IIC 21 would mean a 21 point improvement. The Δ IIC tests is only tested on a 6” concrete slab with no ceiling below.*
Typical STC & IIC Ratings of untreated floor / ceiling assemblies

6” Concrete Slab

STC 55  
IIC 28

8” Concrete Slab

STC 58  
IIC 34

Wood Frame Construction with gypsum topping

Wood Frame Construction

STC 37  
IIC 35

STC 50  
IIC 38

Underlayment Product Selector

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