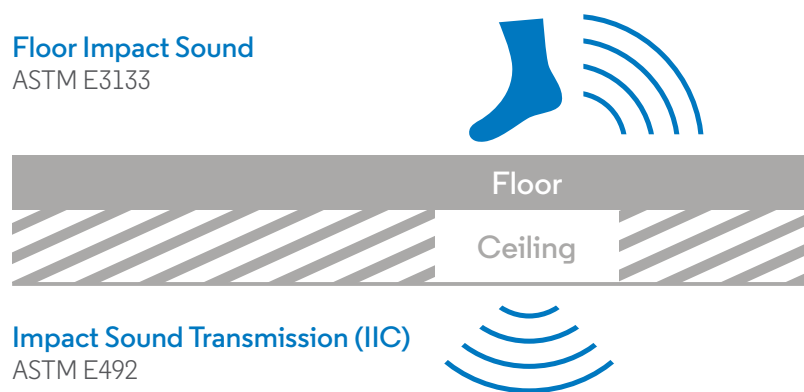


ACOUSTIC BULLETIN

# New Floor Impact Sound Test Data Available from Ecore

Ecore has impact sound test data available for five surfaces: concrete, VCT, LVT, Origins, and Vinyl Rx. Floor impact sound is the noise produced in a room from an impact on the floor in the same room; an example would be the click of high-heels on a marble surface.



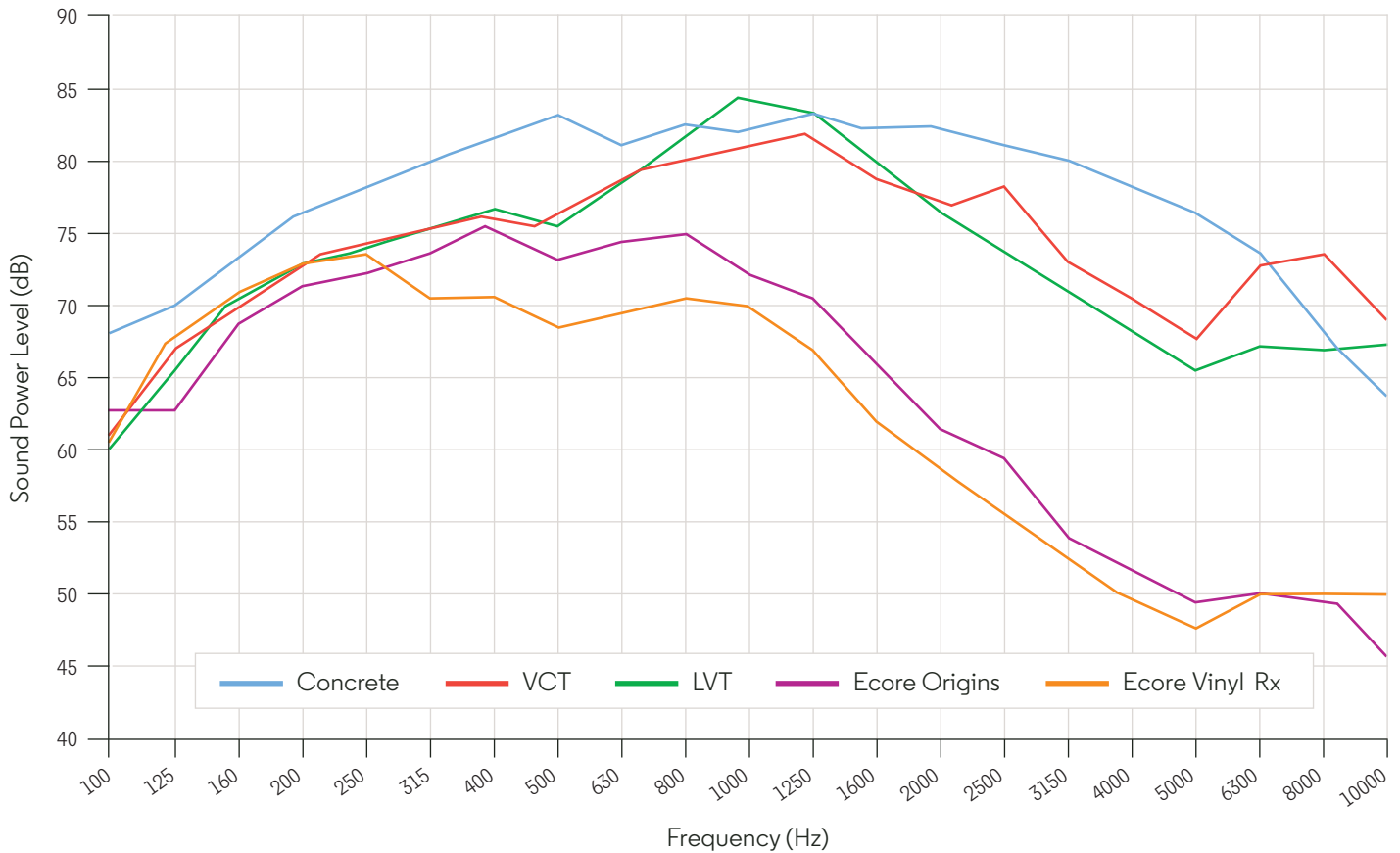
Ecore’s testing was performed by Intertek, an independent IAS-certified lab in York, Pa. The results show that floor impact sound from generic VCT and LVT was 14 decibels (dB) higher than the floor impact sound from Ecore’s Vinyl Rx, a vinyl surface with a vulcanized composition rubber backing. A 14dB increase in noise level is equivalent to 2.5 times louder in terms of perceived loudness.

Ecore also found that the floor impact sound levels for Ecore Commercial’s Origins, a vulcanized composition rubber and cork surface, and Vinyl Rx surfaces were below the floor impact sound levels for a bare concrete floor at all frequencies. Floor impact sound levels for Origins and Vinyl Rx were also below the VCT and LVT levels at almost all frequencies. At high frequencies, VCT is as much as 24dB louder than Vinyl Rx. That’s more than four times as loud.

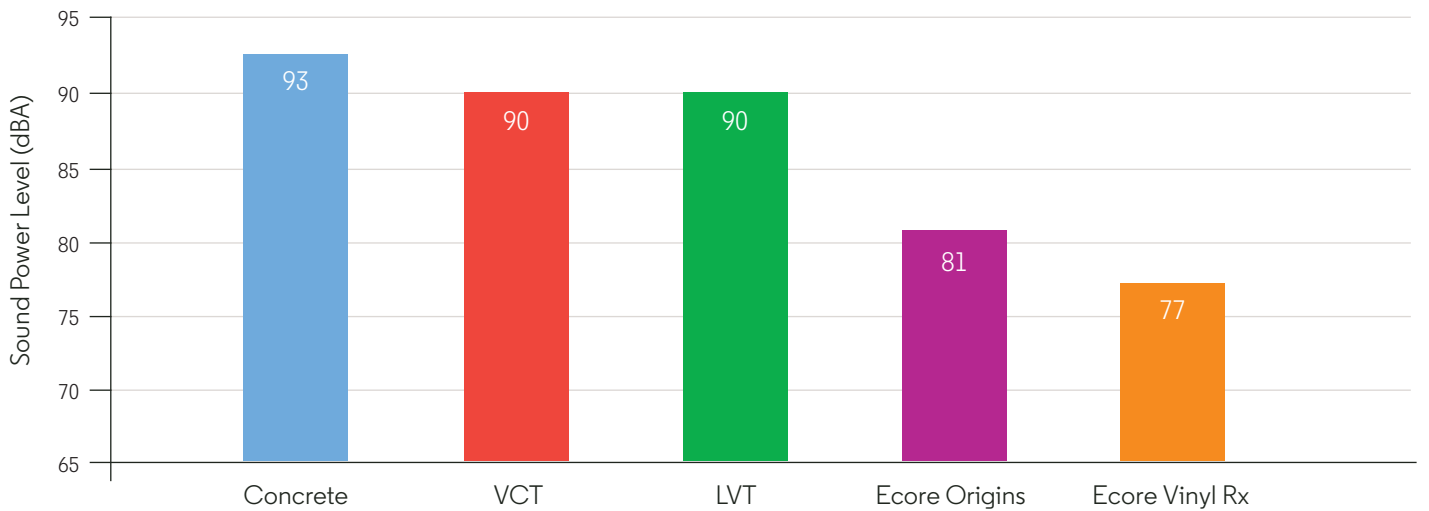
Floor impact sound can be a major source of noise in a multitude of spaces, such as hospitals, schools, and offices. In late 2018, ASTM introduced a new standard for measuring the floor impact sound of various floor coverings (ASTM E3133). As a part of Ecore’s commitment to acoustics, it has tested a number of flooring products according to the new standard.

Noise is of special concern in hospitals, where it consistently ranks as the lowest scoring item on the HCAPHS patient surveys. Guidelines from the Facilities Guidelines Institute (FGI) set forth “Maximum Design Criteria for Noise in Interior Spaces,” but these criteria are for building systems and are based on unoccupied rooms; thus, they do not take into account noises, such as footsteps, generated by building occupants. ASTM E3133 helps address this gap, and provides the healthcare designer with a key acoustic metric for the healing environment.

### Floor Impact Sound Levels (per ASTM E3133)



### Floor Impact Sound Levels (per ASTM E3133)



The graph above shows FISL levels at various frequencies for the different floor surfaces. From the graph, one can see that the FISL noise levels for Ecore Origins and Ecore Vinyl Rx are below the concrete FISL levels at ALL frequencies. FISL noise levels for Origins and Vinyl Rx are below the VCT and LVT levels at almost all frequencies, from 250Hz up. At high frequencies, the VCT is as much as 24dB LOUDER than the Vinyl Rx. That’s more than four times as loud.

In general terms, the graph shows that Origins and Vinyl Rx significantly reduce the “click” (the high frequency portion) of footsteps that is especially prominent with high-heels and hard-soled shoes on hard floor surfaces.