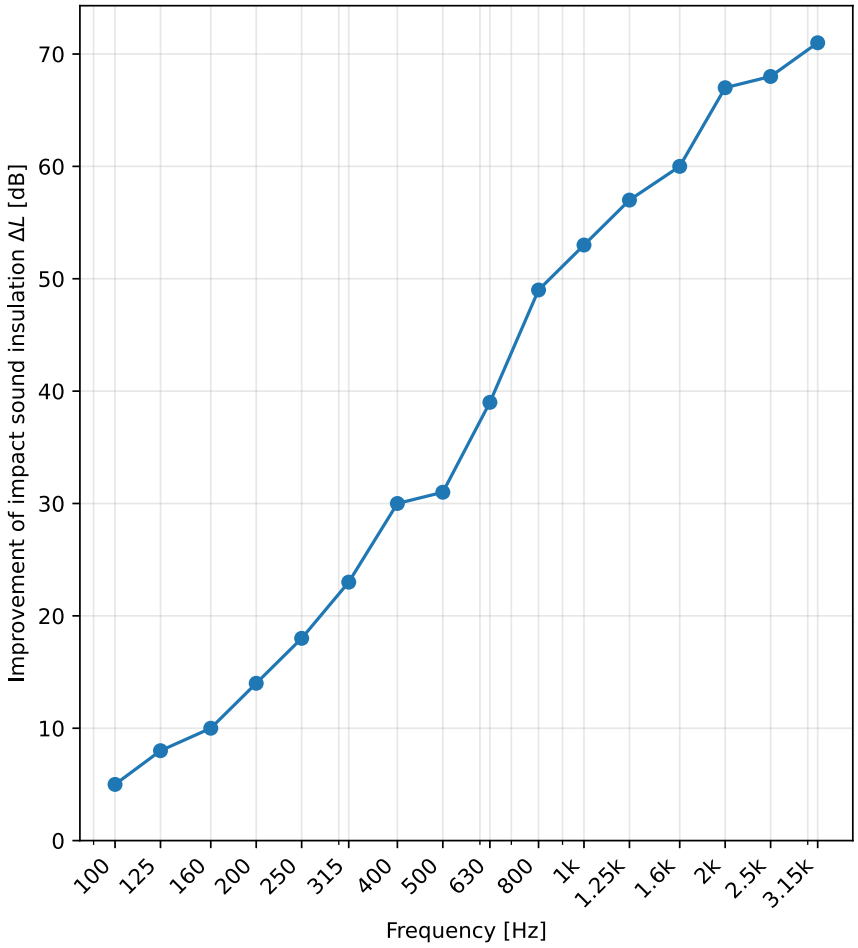
# Floor-covering impact sound improvement

ISO 16251-1 laboratory measurement of the reduction of transmitted impact sound by a floor covering ΔL on a small mock-up per ISO 16251-1:2014. Weighted improvement $\Delta L_w$ rated per ISO 717-2:2020.

| | | | |
|---|---|---|---|
| Client: | Example client | Manufacturer: | Example floors |
| Floor covering: | Textile floor covering (carpet), laid loose | Mounting: | Laid loose on the mock-up plate (ISO 10140-1 category I) |
| Mass per unit area [kg/m²]: | 2.4 | Frequency range [Hz]: | 100 to 3150 |
| Test facility: | Small-mock-up impact rig (example) | Date of test: | 2026-07-21 |
| Temperature [°C]: | 21 | Ambient pressure [kPa]: | 101.2 |

One-third-octave improvement ΔL [dB]

| Frequency f [Hz] | ΔL [dB] |
|---|---|
| 100 | 5.0 |
| 125 | 8.0 |
| 160 | 10.0 |
| 200 | 14.0 |
| 250 | 18.0 |
| 315 | 23.0 |
| 400 | 30.0 |
| 500 | 31.0 |
| 630 | 39.0 |
| 800 | 49.0 |
| 1000 | 53.0 |
| 1250 | 57.0 |
| 1600 | 60.0 |
| 2000 | 67.0 |
| 2500 | 68.0 |
| 3150 | 71.0 |




## $\Delta L_w$ ($C_{I,\Delta}$) = **29 (-13) dB**

Weighted reduction of impact sound pressure level $\Delta L_w$ rated on the 100 Hz to 3150 Hz one-third-octave bands using the ISO 717-2:2020 heavyweight reference floor (Table 4); the statement of results carries the spectrum adaptation term $C_{I,\Delta}$ (ISO 717-2:2020 Formula (A.4)).

Result vs requirement: $\Delta L_w$ = 29 dB, required ≥ 20 dB → **PASS**

**Laboratory:** Phonometry reference example
**Report no.:** EXAMPLE-16251
**Date:** 2026-07-21
**Notes:** Illustrative example. The improvement spectrum is digitized from Foret, Chene and Guigou-Carter (Forum Acusticum 2011, ISO/CD 16251-1 draft), not an accredited measurement.
Operator: phonometry  Signature: _____

■ The results relate only to the tested specimen.