

CSIRO ACOUSTIC MEASUREMENT REPORT

Commonwealth Scientific and Industrial Research Organisation. Infrastructure Technologies Acoustics Testing Laboratory, Research Way, Clayton, Vic 3168 Australia

Warehouse 4, 94-98 Kirkham Road West, Keysborough, Vic 3173

Measurement Type: Impact Sound Insulation (Floor)

AS ISO 140.6-2006 and ISO 10140 Part 3 (2010): Laboratory measurement of impact sound insulation of floors.

AS ISO 140.8 (2006): Laboratory measurement of reduction of transmitted impact noise by floor coverings on a heavyweight standard floor. AS ISO 717.2 (2004): Acoustics - Rating of sound insulation in buildings and of building elements. Part 2: Impact sound insulation

Test Specimen (Area of concrete test floor: 10.8 m² [3.6 x 3.0 m])

Description: • Sunstar 'Oak Classic' 12 mm engineered timber flooring planks · on Sunstar 3 mm EVA underlay · resting on a 150 mm thick concrete subfloor.

Materials7:

- a] Sunstar 'Oak Classic' engineered timber planks: Stock code: HW012-12 & HW012-NEW-12 ('Hastings')
- 12 mm engineered European oak planks, inc 1.2 mm veneer
- Dimensions: 1900 x 190 mm (approx 30% nested)
- With interlocking edge profiles (Sunstar drop-lock system)
- Mass per unit area: 7.8 kg/m² (meas)
- b] Sunstar 3 mm EVA foam underlay, with gold-coloured moisture barrier film; supplied on a roll (1100 mm width, plus 90 mm selvedge), 346 gsm (meas).
- c] Concrete slab subfloor (of the laboratory), 150 mm thick, 360 kg/m² approx.

Installation details:

- The concrete subfloor [item c] was swept in preparation for flooring installation.
- · Underlay [item b] was cut to length and laid {foil up) on the concrete subfloor. 3 pieces of underlay were joined together using the selvedge and pre-applied pressure sensitive tape, covering the entire area of the concrete subfloor (excess allowed to overhang), resting on the surrounding floor. The underlay was not adhered to the concrete subfloor.
- Flooring planks [item a] were laid on top of the underlay (no adhesive) secured together via their interlocking edge profiles. A combination of full and part-length planks was used to fully cover the concrete subfloor with plank joins staggered from row to row. Excess flooring was allowed to overhang and rest on the surrounding floor of the chamber, level with the test-floor
- Installation was carried out by laboratory staff.



Close-up of flooring materials



Test specimen installed in laboratory for test



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