

AS/NZS 4859.1:2018

Thermal insulation materials for buildings

Part 1: General criteria and technical provisions

Amendment No. 1

Revised text amendment

Publishing and Approval Dates

Council of Standards Australia Approval: 17 June 2024

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Summary

This Amendment applies to the following elements:

- Preface
- Clauses 2.3.2, 2.3.3.5, 2.3.3.6, 9.3.2, E4.1
- Tables 2.3.3.1, 6.2.3, 7.2.2

Amendment Details

AS/NZS 4859.1:2018 is amended as follows. The amendments should be inserted in the locations as instructed.

Element	Instruction/New text
Preface	After the first paragraph, add the following: Amendment No. 1 to this Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-058, Thermal Insulation.
Cl 2.3.2	After Item (f), add "(g) Other materials".
Tbl 2.3.3.1	Delete table and replace with the following:

**TABLE 2.3.3.1 —
STANDARD METHODS FOR DETERMINATION OF THERMAL PROPERTIES**

Property	Test methods
Thermal resistance of all categories other than vacuum panels	Any of ASTM C177, ASTM C518, ASTM C1363, ISO 8301, ISO 8302, ISO 8990, EN 12667, EN 12939
Thermal resistance of pipe insulation	ASTM C335 or alternative calculation as per Clause 2.3.3.7 of this Standard
Thermal resistance of loose-fill	ASTM C687 and Appendix C
Thermal resistance of vacuum panels	ASTM C1667 ^a
Thickness of compressible fibrous	ASTM C167 and Appendix B

TABLE 2.3.3.1 (continued)

Ageing factor and/or aged thermal resistance of PUR, PIR, PF and XPS rigid foams	See Section 8
^a ASTM C1667 only measures the centre-of-panel thermal resistance. Adjustments shall be made in order to determine the effective thermal resistance of the entire panel.	

CI 2.3.3.5 In Equation 2.3.3.5(3), delete " $R_{\text{declared}} = dN / \lambda_{50/90}$ " and replace with the following:
 $R_{50/90} = dN / \lambda_{50/90}$

CI 2.3.3.6 Delete the first paragraph, and replace with the following:
 Where a group of homogenous bulk insulation products of similar chemical and physical composition (including density) and differing only in thickness are expected to have the same thermal conductivity, only the thickest, and the thinnest, need to be tested as a minimum requirement. A minimum of 10 specimens of each of the thicknesses shall be measured and the declared thermal conductivity determined in accordance with Clause 2.3.3.5. The highest declared thermal conductivity shall be taken to apply to the whole group and used to determine the declared R-value for each product thickness within the group.

Tbl 6.2.3 Delete table and replace with the following:

**TABLE 6.2.3 —
LOW DENSITY POLYESTER
FIBRE INSULATION
DIMENSIONAL TOLERANCES**

Form of insulation	Length	Width
Cut pieces	+30 mm -5 mm	+10 mm -5 mm
Blankets	+50 mm/m -5 mm/m	+15 mm -5 mm

Tbl 7.2.2 Delete table and replace with the following:

**TABLE 7.2.2 —
LOW DENSITY MINERAL
WOOL INSULATION
DIMENSIONAL TOLERANCES**

Form of insulation	Length	Width
Cut pieces	+30 mm -5 mm	+10 mm -5 mm
Blankets	+50 mm/m -5 mm/m	+15 mm -5 mm

CI 9.3.2 Delete the first paragraph and replace with the following:

The IR reflective component of all products shall pass the requirements of AS/NZS 4201.1, with the following modifications:

CI E4.1 Delete the first paragraph and replace with the following:

Ten test pieces, each 100 mm long and 100 mm wide, shall be cut from the bonded section of each sample piece and conditioned in accordance with Paragraph E3. Test pieces shall be cut such that the edges do not coincide with any fibre reinforcement.