



Ametalin

National Construction Code of Australia Compliance

AS/NZS 4859.1:2002/Amdt1:2006 Compliance

AS/NZS 4200.1:2017 Compliance

Sarking-type material / pliable building membrane checklist

Date: **June 26, 2019**

Company name: **Amalgamated Metal Industries Pty Ltd**

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Product name: **ThermalFloor™ - Extra Heavy Duty**

Product Code(s): **TF**

Product Group in accordance with AS/NZS 4859.1. Section 9: **Group 5 that incorporates Group 1 as its reflective surface**

If Group 1, is the product intended for use as a sarking or a vapour control membrane: **Sarking**

- Colour: **silver/grey/silver**
- Composition: **foil + woven polypropylene + cross linked PE foam**
- Weight: **325 ±2 gsm**
- Thickness: **4000 ±5 µm**

Third party accreditations:

Relevant test certificates are available

AS 1301.448s—1991	Tensile— KN/m
TAPPI Ta70am-00D	Edge tear – N
AS/NZS 4201.1:1994	Dry delamination
AS/NZS 4201.2:1994	Wet delamination
AS/NZS 4201.4:1994	Water penetration
AS/NZS 4201.5:1994	Emittance
AS 1530.2—1993	Flammability
ASTM E 96—2005	Vapour control
ASTM C 518-10	Thermal Resistance

Test method	AS/NZS 4859.1 reference	Acceptable?
Evaluation by statistical sampling	Appendix A2	Yes
Validity of test results	2.2	Yes
		Result
Classification	2.3.2	(f) Large scale
Classification – high emittance side	2.5.1	(b) Non-solar reflective

Test method	Title	Required result	AS/NZS 4859.1 reference	Acceptable?
Determining R-value	Determining thermal properties	Determination by calculation	Table 2.1	Yes
ASTME 408	IRemittance	Reflective Value	< 0.05 on at least one side 0.06—0.99	Clauses 2.4 & 9.3.1 Yes
AS/NZS 4859.1 Appendix I	Surface corrosion and resistance to wet delamination	Pass (except if Group 5, or Group 1 and complies with AS/NZS 4200.1)	Clause 9.3.3	Yes Claimed as Group 1

Packaging and labelling

	Item – all types	AS/NZS 4859.1 ref.	Acceptable?
1	Product name	Table 3.1	Yes
2	Description of contents	Table 3.1	Yes
3	Name and address of manufacturer	Table 3.1	Yes
4	Batch ID, other traceability information	Table 3.1	Yes
5	Safety instructions	Table 3.1	Yes
6	Statement of compliance to AS/NZS 4859.1	Table 3.1	Yes
7	One or more declared R-values accompanied by a clear statement regarding conditions under which it/they apply, preceded by one or more qualifiers: ‘Total’, ‘System’, ‘Material’. When ‘heat flow in’ and ‘heat flow out’ are different, all values shall be printed with equal emphasis/prominence.	Table 3.1 Amdt 1 2006	Yes
8	All R-values shall be presented with equal emphasis/prominence.	Table 3.1 Amdt 1 2006	Yes
	Item – reflective		
9	A statement: ‘the contribution of this product to Total R-value depends on installation and environmental conditions.’	Table 3.1	Yes

10	A statement: 'the R-value will be reduced in the event of the accumulation of dust on upward facing surfaces and in those cavities that are ventilated.'	Table 3.1	Yes
11	The declared R-value shall be the long term value and shall take into account the derating that may arise through ageing or environmental factors.	3.1	Yes
12	R-value reported to two significant figures.	3.1	Yes
Other			
13	R-value expressed as either R_{sys} or R_T .	2.3.3.6	Yes
14	IR emittance in accordance with ASTM E 408 stated on label.	2.4	Yes
15	When performance is measured by testing it shall be performed by a recognised laboratory.	4.2	Yes
16	Calculations by an appropriately qualified person and accompanied by relevant endorsement (check that appropriate emissivity and air spaces are used).	4.3	Yes
17	System or Total declared R-values calculated in accordance with AS/NZS 4859.1 Appendix K.	9.4	Yes

Product brochures, literature and website

	Item	AS/NZS 4859.1 ref.	Acceptable?
1	A statement of compliance to AS/NZS 4859.1	Table 3.1	Yes
2	When performance is measured by testing it shall be performed by a recognised laboratory.	4.2	Yes
3	Calculations by an appropriately qualified person and accompanied by relevant endorsement (check that appropriate emissivity and air spaces are used).	4.3	Yes
4	R-value expressed as either R_{sys} or R_T .	2.3.3.6	Yes
5	The declared R-value shall be the long term value and shall take into account the derating that may arise through ageing or environmental factors.	3.1	Yes
6	R-value reported to two significant figures	3.1	Yes
7	One or more declared R-values accompanied by a clear statement regarding conditions under which it/they apply, preceded by one or more qualifiers: 'Total', 'System', 'Material'. When 'heat flow in' and 'heat flow out' are different, all values shall be printed with equal emphasis/prominence.	Table 3.1	Yes
8	System or Total declared R-values calculated in accordance with AS/NZS 4859.1 Appendix K.	Clause 9.4	Yes
Comments:			

AS/NZS 4200.1 testing – required for Group 1 products (Section 9.2)

Test method	Title	Required result		Acceptable?
c. 1	Scope	Intention for use as:		Sarking, membrane
c. 4	Definition	Clause 4.6 and 4.7		Yes
c. 5 – properties				
<i>a</i> AS/NZS 4201.1	Resistance to dry delamination	Pass		Yes
<i>b</i> AS/NZS 4201.2	Resistance to wet delamination	Pass		Yes
<i>c</i> AS/NZS 4201.3	Shrinkage	< 0.5%		Yes
AS/NZS 4201.4	Resistance to water penetration	Pass		Yes
AS/NZS 4201.1 c. 6.1.2	Tensile strength for duty rating determination (kN/m)*	XHD	<i>MD</i> ≥ 13 <i>LD</i> ≥ 10.5	Yes
		HD	<i>MD</i> ≥ 12.5 <i>LD</i> ≥ 7.5	
		MD	<i>MD</i> ≥ 9.5 <i>LD</i> ≥ 6.0	
		LD	<i>MD</i> ≥ 7.5 <i>LD</i> ≥ 4.5	
		XLD	<i>MD</i> ≥ 6.0 <i>LD</i> ≥ 3.5	
AS/NZS 4200.1 c. 6.1.3	Edge tearing for duty rating determination (N)	XHD	90	Yes
		HD	80	
		MD	65	
		LD	45	
		XLD	30	
AS 2001.2.19	Bursting strength for duty rating determination (N)	XHD	X	Yes
		HD	X	
		MD	X	
		LD	200	
		XLD	X	
ASTM E 96	Resistance to water vapour transmission	High	≥ 450	Yes
		Medium	< 450 > 7	
		Low	≤ 7	
AS/NZS 4201.6	Water absorbency	High	≥ 100	Yes
		Unclassified	< 100	

**MD*= machine direction *LD*= lateral direction

Fire testing

Testing method	Title	Required result	NCC reference	Acceptable?
AS 1530.2	Flammability of materials	≤ 5	C1.10.2(a)	Yes
AS 1530.3	Ignitability	-	C1.10.2(b)	N/A
	flame propagation	≤ 9		
	heat release	-		
	smoke release	≤ 8*		
AS/NZS 3837	Heat and smoke release using cone calorimeter	Group 1 or 2	C1.10.2(a) for internal lining	N/A

*If flame propagation is > 5, depending on application and if other than “sarking-type” product

Allowable usage

c. 7.2 Table 2	Duty: XHD	Table 2 Australia allowable usage	
		1) Walls and gables	Yes
		2) Tiles (if supported > 900)	Yes
		3) Ceilings, floors and sheet roofing	Yes
		Table 2 New Zealand allowable usage	
		1) Walls and gables	Yes
		2) Tiled roofing (if supported for > 1200)	Yes
		3) Ceilings and sheet roofing (if supported for > 1200)	Yes
		4) Floors (if supported for > 600)	Yes
		c. 7.3	Vapour barrier
c. 7.4	Can it be installed as a sarking membrane	Walls and gables	Yes
		other	Yes
c. 8.2	Product is marked with <i>product identifier</i>	On at least one side	Yes
		Repeat no more than 3 m	Yes
		Within central section	Yes
c. 8.3	Roll labelling	Conforms to Appendix B	Yes

Is the product compliant?

Yes

Checked by:

Oscar Archer PhD
Scientific Coordinator