

Group numbers for wall and ceiling linings

According to the National Construction Code, volume 1, internal wall and ceiling linings within class 2 to 9 buildings must comply with specific fire hazard properties. A Group Number is the system used to classify materials proposed for these linings. This classification governs if and where the material can be used. The NCC deemed-to-satisfy provisions vary depending on the building class and application, but in all cases the Group Number must be 1,2 or 3.



Test standards and Fletcher Insulation products compliance:

AS 5637.1:2015 is the standard referenced for the determination of a Group number as stated in the NCC 2019 as a requirement.

Extract from NCC 2019:

4. Wall and ceiling linings

- (a) A wall or ceiling lining system must comply with the **group number** specified in **Table 3** and for buildings not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with **Specification E1.5** have:
 - (i) a **smoke growth rate index** not more than 100; or
 - (ii) an **average specific extinction area** less than 250m²/kg.
- (b) A **group number** of a wall or ceiling lining and the **smoke growth rate index** or **average specific extinction area** must be determined in accordance with AS 5637.1.

According to the standard, an internal wall and ceiling lining material shall be assigned a Group number between 1 and 4 through below testings, with Group 1 being the best performer.

- through physical testing to AS ISO 9705:2003 (with the lining material covering three walls and the ceiling) or
- through small scale testing according to AS 3837 or ISO5660.1 where performance correlation has been proven and confident prediction to ISO9705 can be attained.



Fletcher Insulation has tested their products by physical testing to AS ISO 9705:2003 (with the lining material covering three walls and the ceiling) and/or AS3837 if applicable.

All products achieve either a Group 1 or Group 2 ratings:

Pink® Thermal Slab					
Facing option	Thickness mm	Density kg/m ³	Material R-Value	Group number	SMOGR _{RC} m ² s ⁻² x 1000
Sisalation® HD facing foil	13	32	R0.4	1	<100
	25	32	R0.8		
	38	32	R1.2		
	50	32	R1.5		
	66	32	R2.0		
	75	32	R2.3		
	100	32	R3.0		
Sisalation® Black HD facing foil	13	32	R0.4	1	<100
	25	32	R0.8		
	38	32	R1.2		
	50	32	R1.5		
	66	32	R2.0		
	75	32	R2.3		
	100	32	R3.0		
Pink® NoiseSTOP with a Durasorb® face					
Durasorb®	13	32	R0.4	1	<100
	25	32	R0.8		
	38	32	R1.2		
	50	32	R1.5		
	66	32	R2.0		
	75	32	R2.3		
	100	32	R3.0		



Permastop Building Blanket					
Facing option	Thickness mm	Density kg/m ³	Material R-Value	Group number	SMOGR _{RC} m ² s ⁻² x 1000
Sisalation® LD facing foil	55	11.8	R1.3	1	<100
	55	11.8	R1.3		
	75	10.9	R1.8		
	75	10.9	R1.8		
	90	11.8	R2.0		
	100	14.3	R2.3		
	100	14.3	R2.5		
	130	10.45	R3.0		
	130	12.5	R3.2		
Sisalation® MD facing foil	55	11.8	R1.3	2	<100
	75	10.9	R1.8		
	100	14.3	R2.3		
	100	14.3	R2.5		
	130	10.45	R3.0		
	130	12.5	R3.2		
	130	18	R3.6		
Sisalation® White MD facing foil	55	11.8	R1.3	2	<100
	75	10.9	R1.8		
	100	14.3	R2.3		
	100	14.3	R2.5		
	130	10.45	R3.0		
	130	12.5	R3.2		
	130	18	R3.6		
Sisalation® HD facing foil	55	11.8	R1.3	2	<100
	75	10.9	R1.8		
	100	14.3	R2.3		
	100	14.3	R2.5		
	130	10.45	R3.0		
	130	12.5	R3.2		
	130	18	R3.6		
Sisalation® Black HD facing foil	55	11.8	R1.3	1	<100
	75	10.9	R1.8	2	<100
	100	14.3	R2.3		
	100	14.3	R2.5		
	130	10.45	R3.0		
	130	12.5	R3.2		
	130	18	R3.6		



What group number is required for your project?

Based on the building class and location, wall and ceiling lining material must comply as per the below table and 4(a) as noted on page 1 of this technical bulletin and referenced from NCC 2019 Volume 1:

Table 3 wall and ceiling lining materials (material groups permitted)

Class of Building		Fire-isolated exits and fire control rooms	Public corridors	Specific areas	Other areas
Class 2 or 3, Unsprinklered Excluding accommodation for the aged, people with disabilities and children	Walls	1	1, 2	1, 2, 3	1, 2, 3
	Ceilings	1	1, 2	1, 2, 3	1, 2, 3
Class 2 or 3, Sprinklered Excluding accommodation for the aged, people with disabilities and children	Walls	1	1, 2, 3	1, 2, 3	1, 2, 3
	Ceilings	1	1, 2, 3	1, 2, 3	1, 2, 3
Class 3 or 9a, Unsprinklered Accommodation for the aged, people with disabilities, children and <i>health care buildings</i>	Walls	1	1	1, 2	1, 2, 3
	Ceilings	1	1	1, 2	1, 2, 3
Class 3 or 9a, Sprinklered Accommodation for the aged, people with disabilities, children and <i>health care buildings</i>	Walls	1	1, 2	1, 2, 3	1, 2, 3
	Ceilings	1	1, 2	1, 2, 3	1, 2, 3
Class 5, 6, 7, 8 or 9b schools, Unsprinklered	Walls	1	1, 2	1, 2, 3	1, 2, 3
	Ceilings	1	1, 2	1, 2	1, 2, 3
Class 5, 6, 7, 8 or 9b schools, Sprinklered	Walls	1	1, 2, 3	1, 2, 3	1, 2, 3
	Ceilings	1	1, 2, 3	1, 2, 3	1, 2, 3
Class 9b other than schools, Unsprinklered	Walls	1	1	1, 2	1, 2, 3
	Ceilings	1	1	1, 2	1, 2, 3
Class 9b other than schools, Sprinklered	Walls	1	1, 2	1, 2, 3	1, 2, 3
	Ceilings	1	1, 2	1, 2, 3	1, 2, 3
Class 9c, Sprinklered	Walls	1	1	1, 2	1, 2, 3
	Ceilings	1	1	1, 2	1, 2, 3

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