



EXPOL EMPEROR PANEL

BUILDING PRODUCT INFORMATION SHEET (CLASS 1)

Product Name:

EXPOL Emperor Panel

This includes the following products:

- ***EXPOL Emperor Panel*** <https://www.expol.co.nz/expol-emperor-panel/>
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Product Description and its intended use:

EXPOL Emperor Panel is used in buildings or areas where specialised environments are required.

Panels may be used to provide efficiencies or create sterile and precise climate-controlled environments.

Applications include cool and cold stores, freezers, food processing units, supermarkets, leisure centres, laboratories, shopping malls, agri-businesses and wineries, conservatory roofs, or portable insulated buildings.

EXPOL Emperor Panel comprises outer skins of 0.59BMT pre-painted ColorSteel produced by NZ Steel, with a core of CFC-free expanded polystyrene foam containing flame retardant.

Normal panel width is 1200mm, with the length being produced to order.

EXPOL Emperor Panel is available in a range of thicknesses ranging from 50mm to 250mm.

EXPOL Emperor Panel is tested to ISO 9705 and NZBC verification method C/VM2 appendix A, giving a New Zealand Building Code classification group number 1–5.

Product Identifier:

- ***EXPOL Emperor Panel*** (all lengths and thicknesses).
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Place of Manufacture:

New Zealand

Overseas

For further technical information please contact us.

P: +64 9 634 3449 F: +64 9 634 0756 T: 0800 86 33 73 E: tech@expol.co.nz W: www.expol.co.nz



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Legal and trading name of the manufacturer (s):

EXPOL Limited

Address for Service:

105 Captain Springs Road
Onehunga
AUCKLAND 1061

Website:

www.expol.co.nz

Email address:

tech@expol.co.nz

Phone No.:

0800 86 33 73

NZBN:

9429040411026

Relevant Building Code Clauses:

- Clause **B2 Durability, performance B2.3.1 (a), B2.3.1(b),**
 - Clause **E3 Internal moisture performance E3.3.1,**
 - Clause **F2 Hazardous building materials performance F2.3.1,**
 - Clause **H1 Energy Efficiency, Performance H1.3.1 (a) and H1.3.2 E.**
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Statement on how the building product is expected to contribute to compliance:

- **Clause B2 Durability, performance B2.3.1 (a), B2.3.1(b):** *EXPOL Emperor Panel* has a durability of at least 50 years where transported, stored and installed correctly.

Refer to the design and installation requirements for further information.

- **Clause E3 Internal moisture performance E3.3.1:** *EXPOL Emperor Panel* is moisture resistant and provides thermal resistance where transported, stored and installed correctly.

Refer to the design and installation requirements for further information.

Refer to <https://www.expol.co.nz/resource-centre/?wpdmdl=4221> for product R-values by thickness.

- **Clause F2 Hazardous building materials performance F2.3.1:** *EXPOL Emperor Panel* is an inert, non-toxic material.

- **Clause H1 Energy Efficiency, Performance H1.3.1 (a) and H1.3.2 E.:** *EXPOL Emperor Panel* provides thermal resistance where transported, stored and installed correctly.

Refer to the design and installation requirements for further information.

Refer to <https://www.expol.co.nz/resource-centre/?wpdmdl=4221> for product R-values by thickness.

Limitations on the use of the building product:

- Recommended thicknesses for freezers and chillers are as follows:

EXPOL Emperor Panel Thickness (mm)	Standard Weights (kg per M ²)	Thermal Resistance (R Value at 15°C)	Recommended Thickness for Chillers & Freezers
		R Value	Operating Temperature (°C)
50mm	11.6	R 1.31	–
75mm	12.0	R 1.96	7 down to 3
100mm	12.3	R 2.62	3 down to -3
150mm	13.1	R 3.92	-3 down to -18
175mm	13.5	R 4.58	-18 down to -23
200mm	13.9	R 5.23	-23 down to -30
250mm	14.7	R 6.54	–

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Load Span

- This table provides the approximate limits (in metres) for uniformly distributed loads on simply supported *EXPOL Emperor Panels*. To derive the correct load, the shelf-weight of the panel must be included.

Two sets of data are included in the table.

The light numbers are “Ultimate Limit State Strength Loading” (kPa). Maximum design load is 5kPa.

Minimum design load is 0.5 kPa

Panel Thickness (mm)	SPAN (m)													
	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00
50	3.2	2.0	1.4	1.0	0.8	0.6	0.5							
	2.0	1.4	1.0	0.8	0.6	0.4	0.3							
75	4.7	3.0	2.1	1.5	1.2	0.9	0.7	0.6	0.5					
	3.2	2.3	1.7	1.3	1.0	0.8	0.7	0.5	0.4					
100	3.9	2.8	2.0	1.6	1.2	1.0	0.8	0.7	0.6					
	3.3	2.6	2.0	1.6	1.3	1.1	0.9	0.7	0.6					
125	5.0	3.5	2.6	1.9	1.5	1.2	1.1	0.9	0.8	0.7	0.6			
	3.4	2.6	2.1	1.7	1.5	1.2	1.0	0.9	0.8	0.7	0.6			
150	4.1	3.1	2.4	1.8	1.5	1.2	1.1	0.9	0.8	0.7	0.6			
	3.3	2.7	2.2	1.9	1.6	1.3	1.1	1.0	0.9	0.8	0.7	0.6		
175	5.0	3.6	2.7	2.1	1.7	1.5	1.2	1.1	0.9	0.8	0.7	0.6		
	3.4	2.7	2.3	1.9	1.7	1.4	1.2	1.1	1.0	0.9	0.8	0.7		
200	4.1	3.1	2.5	2.0	1.6	1.4	1.2	1.0	0.9	0.8	0.7	0.6		
	3.3	2.8	2.4	2.0	1.6	1.4	1.2	1.1	1.0	0.9	0.8	0.7		
225	4.7	3.6	2.8	2.3	1.9	1.6	1.3	1.2	1.1	1.0	0.9	0.8	0.7	
	3.3	2.8	2.4	2.0	1.6	1.4	1.2	1.1	1.0	0.9	0.8	0.7		
250	5.0	3.9	3.0	2.5	2.1	1.7	1.5	1.3	1.1	1.0				
	3.2	2.7	2.4	2.1	1.8	1.5	1.3	1.1	1.0					

EXPOL Emperor Panel is tested to ISO 9705 and NZBC verification method C/V/M2 appendix A, giving a New Zealand Building Code classification group number 1 – 5.

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Design requirements that would support the appropriate use of the building product:

Fixing details for **EXPOL Emperor Panel** are available at <https://www.expol.co.nz/expol-emperor-panel/>

Installation Requirements:

Fixing details for **EXPOL Emperor Panel** are available at <https://www.expol.co.nz/expol-emperor-panel/>

- **EXPOL Emperor Panels** may have sharp edges – to protect your eyes and skin, wear protective glasses, gloves, clothing and safety boots when handling the product.
 - There are no additional requirements for PPE when handling or installing **EXPOL Emperor Panel**. It is an inert, non-toxic material.
 - When transporting, storing or installing, ensure the expanded polystyrene core of **EXPOL Emperor Panel** is not exposed to:
 - Petroleum based solvents, or
 - Fire, or
 - Sustained direct sunlight.
 - PVC sheathed electrical cables should not be allowed direct contact with the expanded polystyrene core of **EXPOL Emperor Panel**.
 - **EXPOL Emperor Panel** is compatible with all common construction products.
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Maintenance Requirements:

- Maintenance requirements for the ColorSteel outer skins of **EXPOL Emperor Panel** are available at <https://www.colorsteel.co.nz/resources/warranty/>
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Is the building products/ building product line subject to a warning or ban under section 26 of the Building Act 2004:

Yes

No

If yes, description of the warning or ban undersection 26:

N/A

Date

06 / 04 / 2023

Version	Date	Description of changes and person responsible for making changes
1.0	04/04/2023	First draft (Cameron Brooks)
1.1	06/04/2023	Reviewed and approved (Cameron Brooks)

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