

DeltaOrb-EPS-FR is an Insulated Roof Panel System, comprising of two pre-painted, roll-formed steel skins, with a fire retardant grade expanded polystyrene insulating core.

The top profile offers striking looks with all of the benefits of modern insulated panel technologies while the bottom skin has a roll-formed tongue and groove joining edge.

CodeMark

CodeMark Australia Certificate CM40309 certifies that DeltaOrb-EPS-FR panels complies with the stated performance provisions of the NCC2022.

CodeMark Australia Certificate CM40346 Class 10a Awning and Patio Roof System incorporating DeltaOrb-MW and DeltaOrb-EPS-FR panels certifies compliance with the stated performance provisions of the NCC2022.



Please refer to the certificates, as displayed on our web page, for the exact details of the compliance.

Recommendations

- Patios & Pergolas
- Home Extensions
- Carports
- Commercial Buildings
- Portable Buildings
- Residential Buildings

Profiles Available (Underside Skin)

- Smooth & Elegance

Colour Range - Warranty

Expanded Polystyrene Fire-Retardant Grade (EPS-FR) is a thermoplastic that when exposed to high levels of sustained heat is subject to changes in its structural properties. On extremely hot days with no cooling wind, dark colours have been recorded as reaching extreme temperatures. The manufacturer of the steel recommends the following colours, subject to conditions of use, will maintain a temperature under 78.0°C dry heat (see clause 9, sub-clause j of our product Warranty). Please refer to Clause 12 of the Warranty – Roof Products for full details.

- Off White / Surfsmist ®
- Gull Grey / Shale Grey ™
- Merino / Paperbark ®
- Mist Green / Paperbark ®
- Smooth Cream / Classic Cream ™
- Hamptons White
- Zinc
- Birch / Dune ®
- Armour Grey / Windspray

To maintain Warranty cover with dark colours it is therefore recommended that a Thermosetting Phenolic Composite (TPC) or Mineral Wool (MW) core be used for all colours not listed above.

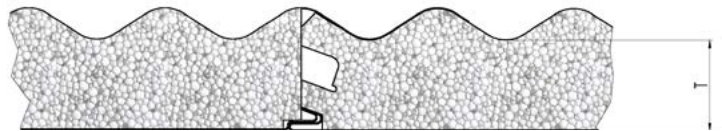
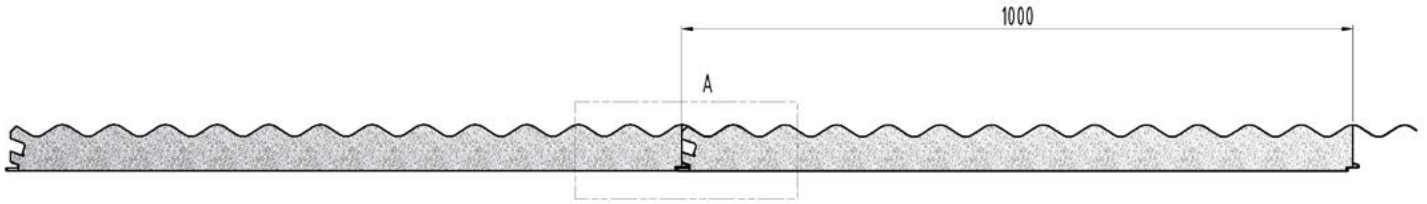
® Colour names are registered trademarks of Bluescope Steel Limited
 ™ Colour names are trademarks of Bluescope Steel Limited



Please refer to the web page for the available colour range, paint finishes and relevant warranty conditions.

Due to the nature of the manufacturing process the actual dimensions may vary. Please refer to the stated acceptable tolerances allowances.

Steel Skin Details	Top Skin	0.42mm / G550 AZ150	
	Bottom Skin	0.55mm / G300 Z275	
Max. Skin Temperature	78°C Dry Heat		
Core Material Details	SL Grade Polystyrene - Fire Retardant Grade		
Thermal Conductivity AS 1366.2/ASTM C 518	Average 0.042 W/mK @23°C		
Adhesive	Thermosetting two-part adhesive		
Core Density	13.5kg/m ³		
Panel Weight (kgs/m²) based on 0.6mm steel skins	50mm Panel	10.58	
	75mm Panel	10.94	
	100mm Panel	11.30	
	125mm Panel	11.66	
	150mm Panel	12.02	
	175mm Panel	12.38	
External Roof R Value (m².K/W) AS/NZS 4859 Parts 1 & 2:2018	Thickness	Winter (15°C)	Summer (23°C)
	50mm Panel	1.38	1.36
	75mm Panel	1.90	1.85
	100mm Panel	2.52	2.43
	125mm Panel	3.13	3.02
	150mm Panel	3.69	3.56
Certificate of Conformity	CodeMark Australia Certificate - CM40309 & CM40346		
	Length Tolerance (mm)	5mm +/-	
Sheet Coverage (mm)	1000mm 5mm +/-		
Length (mm)	Cut to Length Min of 1800mm		
Thickness (mm)	50, 75, 100, 125, 150, 175, 200		
Minimum Roof Pitch	Building Classes 1-9		- 5°
	Building Class 10		- 3°
Flatness Standards	0.42mm	Surface deformations can be apparent to the naked eye when observed in certain lighting conditions	
	0.55mm		



Detail A

Exposure to the External Surface - AS 3959:2018

BRANZ Fire Test Certificate 805 - 24-10-2018 - BAL40

Early Fire Hazard Properties AS 1530.3:1999

AWTA Test Report 18-006076 14-11-2018

Index	Test Range	External Top Skin
Ignitability	0-20	0
Spread of Flame	0-10	0
Heat Evolved	0-10	0
Smoke Developed	0-10	2

Single Spans (mm)

Wind Category	Panel Thickness	3 Sides Open	2 Sides Open	1 Side Open	Fully Enclosed
N2 (W33)	50	5400	5000	4500	4300
	75	6500	5500	5000	4700
	100	7200	6200	5700	5500
N3 (W41)	50	4800	3800	3300	3000
	75	5500	4300	3900	3700
	100	6200	5000	4500	4300
N4 (W50)	50	4000	3300	3000	3000
	75	4600	3600	3400	3300
	100	5300	4100	3800	3500

Delta Orb-EPS-FR Acoustic Values

Frequency	50mm		125mm	
	STC	RW	STC	RW
100	15.41	15.00		
200	18.81	17.70		
400	22.31	19.69		
800	23.69	17.31		
1000	25.61	18.29		
1250	21.01	30.10		
2000	34.79	37.30		
2500	41.70	37.09		
5000	44.61	39.90		
	STC	24.00	23.00	
	RW	25.00	24.00	

DeltaOrb-EPS-FR Acoustic Testing has been performed in compliance with the requirements of AS 1191-2002 "Acoustics - Method for Laboratory Measurement of Airborne Sound Insulation of Building Elements".

The procedures specified by AS 1276-1979 and AS/NZS ISO 717.1:2004 were used to calculate the Sound Transmission Class (STC) and The Weighted Sound Reduction Index $R_w = 25$ dB.

DeltaOrb-EPS-FR is classified as trafficable when used for maintenance purposes. The following recommendations should be observed at all times.

Recommendations

- Wear flat, rubber soled shoes
- Walk over the roof supporting beams
- Spread your weight over as many roof crests as possible
- Crawl boards should be used when accessing areas not supported by a structure

DeltaOrb-EPS-FR Fixing Details

Crest fixing only. One fixing every second crest

Panel Thickness (mm)	Fixing into Steel	Fixing into Timber
50	Tek 14 x 115 Hex Head Screw	T17 14 x 125 Hex Head Screw
75	Tek 14 x 135 Hex Head Screw	T17 14 x 150 Hex Head Screw
100	Tek 14 x 150 Hex Head Screw	T17 14 x 175 Hex Head Screw
125	Tek 14 x 175 Hex Head Screw	T17 14 x 200 Hex Head Screw
150	Tek 14 x 200 Hex Head Screw	T17 14 x 230 Hex Head Screw
175	Tek 14 x 230 Hex Head Screw	T17 14 x 265 Hex Head Screw
200	Tek 14 x 260 Hex Head Screw	T17 14 x 300 Hex Head Screw

Use Cyclone Plate and Neo Washer on each fixing.

Upon Installation the overlap needs to be stitch screwed or riveted every 300mm.



As at the stated Version Date all of the information contained in this document is correct. Please check on our WebPage to ensure that you're referencing the current version.