# Technical Data Sheet

Version 50
Current as of: 24/03/21

Certificate CM40189

BAL40

Colorbond

## Product Description

Spark Panel® is a versatile and high performing insulated wall and ceiling panel used in controlled environments such as cold storage, food preparation areas and clean rooms, but extends its use to transportable offices, wall partitions and many other applications.



| Panel Thickness (mm) | 50 | 75 | 100 | 125 | 150 | 200 | 250 |
|---|---|---|---|---|---|---|---|
| Typical Mass (kg/m²) | 11.3 | 11.6 | 12.0 | 12.3 | 12.7 | 13.3 | 14.0 |
| SL Grade Declared λ (W/m.K) at 23°C | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 |
| SL Grade Declared R-value (m²K/W) at 23°C | 1.20 | 1.80 | 2.40 | 3.00 | 3.60 | 4.85 | 6.05 |
| SL Grade Total R-value (m²K/W) at 6°C | 1.45 | 2.10 | 2.74 | 3.38 | 4.03 | 5.31 | 6.60 |
| SL Grade Total R-value r) | 1.41 | 2.04 | 2.66 | 3.28 | 3.91 | 5.16 | 6.41 |
| SL Grade Total R-value er) | 1.34 | 1.94 | 2.53 | 3.13 | 3.72 | 4.91 | 6.09 |

Note: The Declared R-value is at 23°C in accordance with AS/NZS 4859.1:2018 & AS/NZS 4859.2:2018.

## Span Table

NON-CYCLONIC REGION A&B (WALL APPLICATIONS ONLY)
SL Grade EPS-FR Core / 0.6mm Steel Skins.
Maximum uniformly distributed ultimate wind load (kPa) for the given span:

| | Panel Thickness (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 50 | 75 | 100 | 125 | 150 | 200 | 250 |
| 1500 | 3.39 | 5.09 | 6.79 | 8.48 | 10.18 | 13.58 | 16.97 |
| 2700 | 1.86 | 2.83 | 3.77 | 4.71 | 5.66 | 7.54 | 9.43 |
| 3900 | 0.95 | 1.57 | 2.09 | 2.62 | 3.14 | 4.19 | 5.24 |
| 5100 | 0.54 | 0.92 | 1.22 | 1.53 | 1.84 | 2.45 | 3.06 |
| 6300 | 0.33 | 0.60 | 0.80 | 1.00 | 1.20 | 1.60 | 2.01 |
| 7500 | - | 0.42 | 0.57 | 0.71 | 0.85 | 1.13 | 1.42 |
| 8700 | - | 0.30 | 0.42 | 0.53 | 0.63 | 0.84 | 1.05 |

| | Panel Thickness (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 50 | 75 | 100 | 125 | 150 | 200 | 250 |
| 1500 | 2.72 | 4.07 | 5.43 | 6.79 | 8.15 | 9.92 | 9.92 |
| 2700 | 1.51 | 2.26 | 3.02 | 3.77 | 4.53 | 5.51 | 5.51 |
| 3900 | 1.04 | 1.57 | 2.09 | 2.61 | 3.13 | 3.82 | 3.82 |
| 5100 | 0.61 | 0.92 | 1.22 | 1.53 | 1.84 | 2.45 | 2.92 |
| 6300 | 0.40 | 0.60 | 0.80 | 1.00 | 1.20 | 1.60 | 2.01 |
| 7500 | 0.28 | 0.42 | 0.57 | 0.71 | 0.85 | 1.13 | 1.42 |
| 8700 | - | 0.30 | 0.42 | 0.53 | 0.63 | 0.84 | 1.05 |

*Refer notes 1-4.

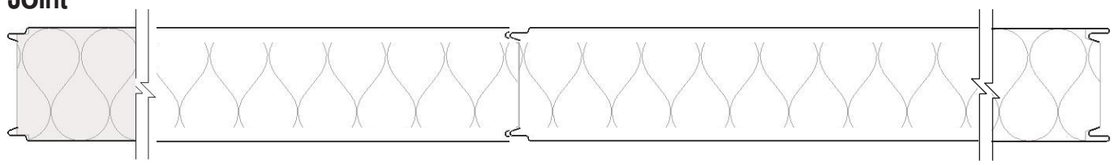
| | |
|---|---|
| Core | EPS-FR (Expanded Polystyrene with fire retardant) |
| Width (cover mm) | 1200 |
| Thickness (mm) | 50, 75, 100, 125, 150, 200, 250 |
| Length | Up to 16m (check for availability) |
| External Material | BlueScope COLORBOND® Steel 0.6mm G300 CRP Grade |
| External Finishes | Plain, Ribbed, Satinline |
| Exterior Colour Options | COLORBOND® Intramax™ or other standard & non-standard colours |
| Internal Material | BlueScope Colourbond® Steel 0.6mm G300 CRP Grade |
| Internal Finishes | Plain |
| Interior Colour Options | COLORBOND® Intramax™ |
| Paint System | AS/NZS 2728 & AS 1397 |
| Acoustic Properties | Rw 24 - 25 depending on thickness |
| Material Group Numbers | C1.10 Group 1 & 2[a] |
| Bushfire Attack Level | BAL-40 (All exposed core to be covered with flashing) |
| Fire Hazard Properties | |
| Ignitability Index | AS/NZS 1530.3 0 |
| Spread of Flame Index | 0 |
| Heat Evolved Index | 0 |
| Smoke Index | 2-3 |
| $SMOGRA_{FC}$ | < 100 |

EPS-FR

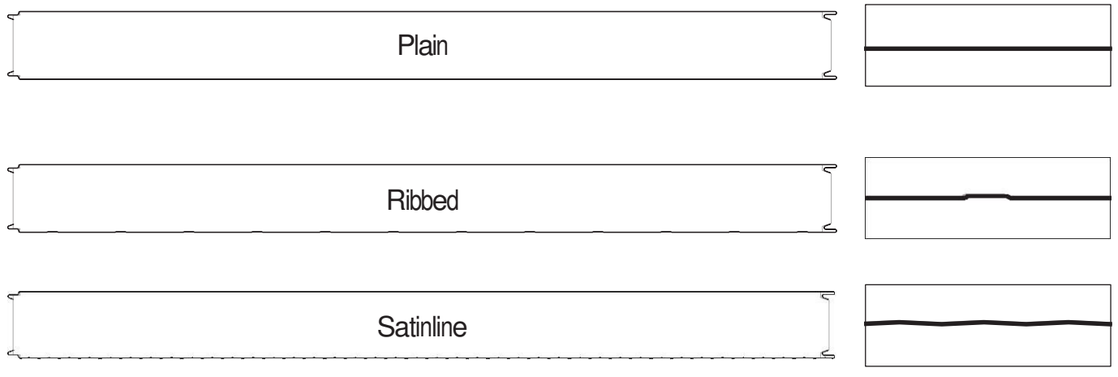

# Technical Data Sheet

Version 50
Current as of: 24/03/21

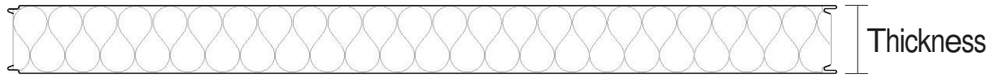

## Joint



## Profiles




## Dimensions




1200mm cover width

# Span Table Internal

SL Grade EPS-FR Core / 0.6mm Steel Skins. Maximum span (mm):

a. AS 5637.1 / AS ISO 9705 - BCA Group Number (Spec C1.10)
Spark Panel® EPS-FR steel skinned insulated building panels conform to the requirements of the BCA Specification C1.10 as either Group 2 or Group 1 depending on the thickness and construction detail. Group 1
Panel up to 250mm thick with steel 'wall-wall' and 'wall-ceiling' angles fixed with steel rivets or screws at maximum 300mm centres is classified as Group 1.
Group 2

Panel up to 150mm thick with aluminium 'wall-wall' and 'wall-ceiling' angles fixed with aluminium rivets or screws at 300mm centres is classified as Group 2. Panel thicker than 150mm requires steel 'wall-wall' and 'wall-ceiling' angles fixed with steel rivets or screws at 300mm centres to be classified as Group 2.

The technical information contained in this document cover a breadth of applications where Spark Panel® may be used, which may be outside the scope of our Code mark certificate. Data specific to Code Mark certification can be found on Spark Panel®s CoC CM40189.

| | Panel Thickness (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 50 | 75 | 100 | 125 | 150 | 200 | 250 |
| Walls (Non-Load Bearing) | - | 5700 | 7100 | 8300 | 9300 | 10800 | 12000 |
| Walls (Load Bearing) | - | 5100 | 6500 | 7500 | 8200 | 9500 | 10700 |
| Ceilings | - | 5100 | 6300 | 7200 | 7800 | 9000 | 9900 |

| | Panel Thickness (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 50 | 75 | 100 | 125 | 150 | 200 | 250 |
| Walls (Non-Load Bearing) | - | 6500 | 7500 | 8900 | 9100 | 10500 | 11700 |
| Walls (Load Bearing) | - | 6000 | 6900 | 7700 | 8400 | 9700 | 10900 |
| Ceilings | - | 5300 | 6000 | 6900 | 7500 | 8600 | 9600 |

*Refer notes 3-10.

SPAN TABLE NOTES:

1. Extended span tables including cyclonic regions C&D and 300mm thick panel are also available. Refer Bondor®.
2. Fixing with min. 14g tek screws (x4 off) or mushroom head bolts (x2 off) per fixing point are required.
3. Pressures specified are for wind gusts only per AS/NZS 1170.2.
4. Deflection limit of span/150 applies, and in accordance with Serviceability Limit State criteria per AS/NZS 1170.0 - TABLE C1.
5. This span table applies for cold storage constructed wholly within a larger enclosed building. Pressure relief port is to be provided for a freezer in accordance with Bondor® recommendation.
6. Panel thicknesses of not less than 100mm are recommended for chillers, not less than 150mm for freezers and not less than 200mm for blast freezers, depending on structural considerations. Check 'R' value for insulation requirements.
7. Fixing with mushroom head bolts (x1 off) minimum per panel per line of support is required.
8. Self weight of the panel has been allowed for, plus an allowance of up to 10kg/m² for light duty fittings (lights, etc.). No other dead loads permitted.
9. Non-trafficable maintenance access (concentrated load) of 140kg on any span has been allowed for.
10. Distributed live load of 0.25kPa (as per AS/NZS 1170.1) has been allowed for. Bondor® tests comply with details outlined in AS 4040.0, AS 4040.1, AS 4040.2, AS 4040.3, AS 1562.1 and AS/NZS 1170.1.



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**Contact us: www.sparkbusinessgroup.com.au | Email: enquiry@sparkbusinessgroup.com.au | Tel: (02) 88074717**

# Product Specification

BON0532 Specification Sheets
v14 Current as of: 20/03/21

| | |
|---|---|
| **Product** | Spark Panel® Insulated Wall Panel |
| **Product Description** | Spark Panel® is a versatile and high performing insulated wall and ceiling panel used in controlled environments such as cold storage, food preparation areas and clean rooms, but extends its use to transportable offices, wall partitions and many other applications. |
| **Supplier** | Spark |
| **Contact Number** | **Email:** enquiry@sparkbusinessgroup.com.au \| **Tel: (02) 88074717** |
| **Website** | www.sparkbusinessgroup.com.au |

## Product Overview

| | |
|---|---|
| **Core** | EPS-FR<br>(Expanded Polystyrene with fire retardant) |
| **Width (cover mm)** | 1200 |
| **Thickness (mm)** | 50, 75, 100, 125, 150, 200, 250 |
| **Length** | Up to 16m (check for availability) |
| **External Material** | Bluescope COLORBOND® Steel 0.6mm G300 CRP Grade |
| **External Finishes** | Plain, Ribbed, Satinline |
| **External Colour Options** | COLORBOND® Intramax™ or other standard & non-standard colours |
| **Internal Material** | Bluescope COLORBOND® Steel 0.6mm G300 CRP Grade |
| **Internal Finishes** | Plain |
| **Interior Colour Options** | COLORBOND® Intramax™ |
| **Paint System** | AS/NZS 2728 & AS 1397 |
| **Accreditations** | Codemark Certificate Number CM40189 |
| **Acoustic Properties** | Rw 24 - 25 depending on thickness |
| **Material Group Numbers** | C1 .10 Group 1 & 2 |
| **Bushfire Attack Level** | BAL-40 (All exposed core to be covered with flashing) |

## Technical Properties

### Thermal AS/NZS 4859.1

| | |
|---|---|
| **Total R-Value ($m^2K/W$)** | 50, 75,100, 125,150,200, 250mm SL Grade BondorPanel® delivers Total R-value of 11.41, 2.04, 2.66, 3.28, 3.91, 5.16, 6.41 for insulation average temperature of 15°C. Contact us for other temperatures and different EPS-FR core grades. |

### Acoustics - AS 1191, AS/NZS 1276 & AS/NZS ISO 717.1

| | |
|---|---|
| **Rw Value (dB)** | Spark Panel® has been tested in accordance with the requirements of AS 1191. The Weighted Sound Reduction Index (Rw) of the panel is calculated using AS/NZS 1276 and AS/NZS ISO 717 .1 respectively with acoustic values of Rw 24 - 25 depending on thickness. Refer to Bondor® Australia for your specific application. |

### Fire

| | |
|---|---|
| **Fire hazard properties** | AS/NZS 1530.3 |
| **Ignitability Index** | 0 |
| **Spread of Flame Index** | 0 |
| **Heat Evolved Index** | 0 |
| **Smoke Index** | 2-3 |
| **$SMOGRA_{RC}$** | <100 |
| **Material Group Numbers AS 5637.1 / AS ISO 9705** | Spark Panel® EPS-FR steel skinned insulated building panels conform to the requirements of the BCA Specification C1 .10 as either Group 2 or Group 1 depending on the thickness and construction detail.<br>Group 1 - Panel up to 250mm thick with steel 'wall-wall' and 'wall-ceiling' angles fixed with steel rivets or screws at maximum 300mm centres is classified as Group 1 .<br>Group 2 - Panel up to 150mm thick with aluminium 'wall-wall' and 'wall-ceiling' angles fixed with aluminium rivets or screws at 300mm centres is classified as Group 2. Panel thicker than 150mm requires steel 'wall-wall' and 'wall-ceiling' angles fixed with steel rivets or screws at 300mm centres to be classified as Group 2. |
| **Bushfire Attack Level AS 3959** | Spark Panel® is suitable for use as external walls of Class 1 and 10 buildings to be constructed in designated bushfire prone areas that have a BAL-40 or less. |

# Specification

BON0532 Specification Sheets v14

## Structural - AS/NZS 1170, AS 1562.1, AS4040

| | |
|---|---|
| **Span Tables** | Spark® provides the latest Ultimate Limit State Span Tables developed specifically for Australasian conditions, in accordance with AS/NZS 1170, AS 1562.1 & AS 4040. Refer to Span Tables for detailed design guidelines and Span Tables for both Non-Cyclonic Regions A & B and Cyclonic Regions C and D. Extended Span Tables for Internal Wall, Ceiling and Cold room Applications, and for Residential Applications are also available. Refer to Span Table Notes for design guidelines relating to fixing, and deflection limits. The panel design shall be specified by the certifying engineer as determined from the Span Tables. |
| **Support Details** | The support spacing shall be specified by the structural engineer as determined from the Span Tables. |

## Safe Handling & Installation

| | |
|---|---|
| **Panel Length** | Up to 16m, however site, transport and wind load restrictions can limit panel length. |
| **Storage** | Panels should always be kept dry and if placed on site, stored off the ground, slightly inclined, allowing adequate drainage and ventilation of the panel pack. No other materials to be stored I stacked on top of panel pack. |
| **Handling** | In the event of manual handling, careful consideration should be given to panel weight and appropriate PPE. Consider using mechanical aides if necessary. |
| **Safety** | The contractor is to determine and use safe working methods throughout the installation and construction period, which complies with OHS requirements. A safe work method template (although NOT project specific) is available from Spark®. |
| **Supporting Frame** | The builder is to ensure that the substrates including slabs and kerbs; and sub frames are straight, smooth and fit for purpose. |
| **Fixing** | Fixings are to meet the requirements of Bluescope TB-16 Fasteners for Roofing and Walling Product Selection Guide. Fasteners must be manufactured from high grade carbon steel with a minimum class 4 anti-corrosion coating as per Australian Standards. Refer to Span Tables Notes for design guide relating to screw fixing and IPCA for cold storage compliance. |
| **Flashing** | Flashings are manufactured from 0.55mm Bluescope COLORBOND® steel and installed to AS 1562.1 or as otherwise specified in the Bondor® Cold Storage or Cladding Construction Drawings. Aluminium can be used if there is no Group Number requirement. Refer to IPCA for cold storage compliance. |
| **Sealant** | Sealant to be neutral cure and meet recommendations for sealants as per Bluescope TB-9 Sealants for Exterior Finishes. Silicon, polyurethane, butyl mastic and acrylic based sealants may be appropriate if neutral cure and recommended by their manufacturer for use on COLORBOND® steel and for the application. Sealant to be placed between flashings/angles and panel and between panel joints as shown on the Spark® Standard Construction Details. |
| **Installation** | Installation as per the Spark® Standard Construction Details. •<br>Panels are to be cut & trimmed to ensure a flush finish.<br>• Panels are to be confirmed square & plumb as per project requirements.<br>• Panels are to be cut with a suitable metal cutting circular type saw. Angle grinder is not recommended.<br>• Penetrations for outlets, vents, flues etc. are to be flashed & sealed with appropriate materials. Refer flashing details above.<br>• Gaps to be filled with a suitable sealant or foam filler.<br>• Refer to Spark® Standard Construction Details & Fixing Details above for fastener requirements.<br>• Remove all swarf and any foreign matter immediately from all panel surfaces as per Bluescope TB-5 Swarf staining of steel profiles. |
| **Maintenance** | Refer to Bluescope TB-4 Maintenance of COLORBOND® and Zincalume® Steel and the relevant Spark® maintenance information. |

## Warranties & Disclaimers

| | |
|---|---|
| **Warranty** | Bondor offer a conditional warranty up to 10 years on SparkPanel® for use as cool room panels from install date for projects on an application basis, dependent on project location, design, installation, end use, environmental conditions and maintenance of the product. Please contact the Spark sales team with your specific project details for more information on the available conditional warranties. |
| **Disclaimers** | Under certain light conditions this product may show an undulating surface which can vary depending on exterior profile and steel gauge selection as well as the environments varying light conditions. |

**Contact us:** www.sparkbusinessgroup.com.au | **Email: enquiry@sparkbusinessgroup.com.au** | **Tel: (02) 88074717**