

We've Got It Covered

ULTRACORE vs SOLID Aluminium

Fire Performance | Thermal Performance | Water-proofing An Impartial Overview based on Logic, Testing and Evidence

ULTRACORE & SOLID panels are both **<u>DTS</u>** non-combustible – firstly lets take a look how.



ULTRACORE

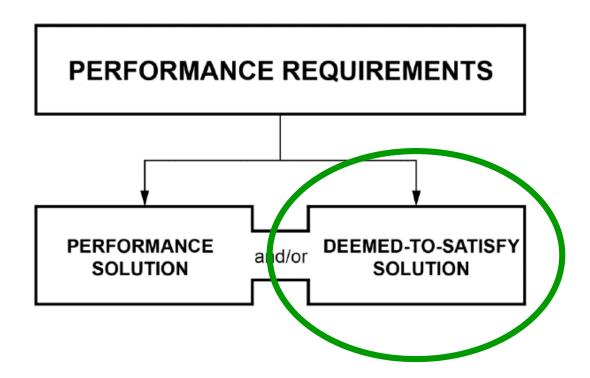




Solid Aluminium Panel

Deemed-to-Satisfy Compliance in NCC 2019

- 1. Deemed-to-Satisfy Solution (Clause C1.9)
- 2. Performance Solution (CV3 Verification Method)





Test Certificates used to Confirm C1.9 Compliance

- AS 1530.1
- AS 1530.3
- NATA Accredited
- AS 1530.2 for Sarking





	Certi	ficate of Test		
Quote No.: NK7601			REPORT No.: FNC11679	
COME	BUSTIBILITY TEST FOR MA	TERIALS IN ACCORDANCE WITH AS 15	30.1-1994	
TRADE NAME:	Ultracore G2			
SPONSOR:	Blue Chip Group 62 Division Street Welshpool WA AUSTRALIA			
DESCRIPTION OF				
TEST SAMPLE:		d the tested specimen as the corrugated uminium composite sandwich panel.	profiled aluminium core	
	Nominal thickness: Nominal mass: Colour:	0.3-mm to 0.5-mm 4 kg/m² (measured); 4.564 kg/m² (sj silver	pecified by sponsor)	
TEST PROCEDURE:	for fire tests on bu Combustibility Test fo An alternative suitabl	e tested in accordance with Australian : ilding materials, components and st r Materials. e insulating material was used to fill the specified in Clause 4.2 of ISO 1182:2010	ructures, Part 1- 1994: e annular space between	
RESULTS:	Mean furnace thermo	couple temperature rise	11.0°C	
	Mean specimen centr	e thermocouple temperature rise	14.2°C	
	Mean specimen surfa	ce thermocouple temperature rise	5.4°C	
	Mean duration of sus	tained flaming	0 seconds	
	Mean mass loss		0.09 %	
DESIGNATION:	The material is NOT of Clause 3.4 of AS 1530	eemed COMBUSTIBLE according to the .1-1994.	test criteria specified in	
	t and they are not intend	ur of the test specimens of the mater ed to be the sole criterion for assessing		
	3 September 2015 / of April 2016 without alt	TEST NUMBER: 1147 erations or additions.	76	_
Heherson Alarde Testing Officer		Roddy Leader, Fire Testing and Assessments		
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	Cer	tificate	of les	st	
Quote No.: NZ7601				REPORT No.: FNE11	680
AS/NZS 153		JS DETERMINATION		Y, FLAME PROPAGATION,	
TRADE NAME:	Ultracore G2				
SPONSOR:	Blue Chip Group 62 Division Street Welshpool WA AUSTRALIA				
DESCRIPTION OF SAMPLE:	The sponsor described the of the following layers:	tested specimen as an a	luminium composit	e sandwich decorative panel comp	rised
	Layer 1: 0.7-mm thick Layer 2: 0.1-mm thick Layer 3: 0.3-mm thick Layer 4: 0.1-mm thick	corrugated profiled alum adhesive film;	iinium core, expand	ed to 2.6-mm;	
	Layer 5: 0.5-mm thick The layers were adhered t	aluminium face finished			
	Nominal total thickness: Nominal total mass: Colour:	4 mm 3.7 kg/m ² (measured); silver (exposed face co	4.564 kg/m² (specifi	-	
TEST PROCEDURE:	components and structure	es, Part 3: Simultaneous o	determination of ign	530, Method for fire tests on bu itability, flame propagation, heat re e specimen holder in four places.	
RESULTS:	The following means and s				
	Parameter	Mean	Star	idard Error	
	Ignition Time (min)	N/A		N/A	
	Flame Spread Time (s)	N/A		N/A	
	Heat Release Integral (N/A	
	Smoke Release (log10D)			0.147	
	For regulatory purposes the	•	-		
	Ignitability Index	Spread of Flame	Heat Evolved	Smoke Developed	
	(0-20)	(0-10)	(0-10)	(0-10)	
	0	0	0	1	
	test may be used to directly a re hazard under all fire condit		hould be recognised	that a single test method will not p	rovide
DATE OF TEST:	12 August 2015		TEST NUMBER:	11459	
issued on the 4 th day	of April 2016 without alterati	ons or additions.			
fulade	-	B Ruce			
Heherson Alarde Testing Officer		rett Roddy eam Leader, Fire Testing	and Assessments		
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ULTRACORE is DTS compliant as per C1.9(e)(vii)

- (e) The following materials may be used wherever a non-combustible material is required:
 - (i) Plasterboard.
 - (ii) Perforated gypsum lath with a normal paper finish.
 - (iii) Fibrous-plaster sheet.
 - (iv) Fibre-reinforced cement sheeting.
 - (v) Pre-finished metal sheeting having a *combustible* surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.
 - (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.
 - (vii) Bonded laminated materials where—
 - (A) each lamina, including any core, is non-combustible; and
 - (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and
 - (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.

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AS 1530.1 Test for Material Combustibility is Required for DTS Compliance with C1.9(e)(vii)(A)

- AS 1530.1
- Combustibility test
- Each Iamina must PASS
- Including the core





<u> </u>			· ·
Cert	itica	te ol	f Test

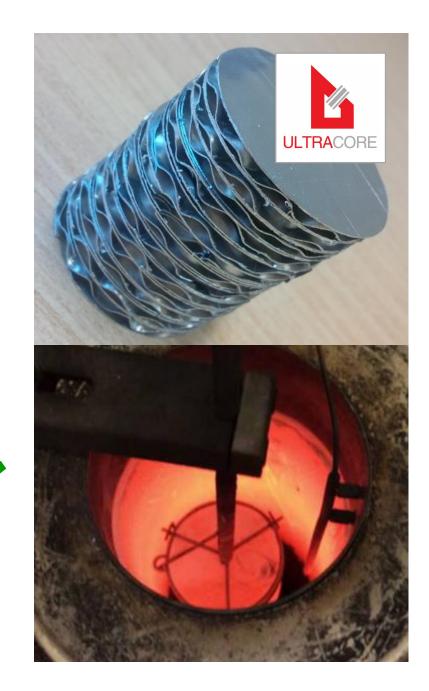
Quote No.: NK7601			REPORT No.: FNC11679
COMB	USTIBILITY TEST FOR MA	TERIALS IN ACCORDANCE WITH AS 15	30.1-1994
TRADE NAME:	Ultracore G2		
SPONSOR:	Blue Chip Group 62 Division Street Welshpool WA AUSTRALIA		
DESCRIPTION OF TEST SAMPLE:		the tested specimen as the corrugated minium composite sandwich panel.	profiled aluminium core
	Nominal thickness: Nominal mass: Colour:	0.3-mm to 0.5-mm 4 kg/m² (measured); 4.564 kg/m² (sj silver	pecified by sponsor)
TEST PROCEDURE:	for fire tests on bui Combustibility Test for An alternative suitable	tested in accordance with Australian Iding materials, components and st Materials. insulating material was used to fill the pecified in Clause 4.2 of ISO 1182:2010	tructures, Part 1- 1994: e annular space between
RESULTS:	Mean furnace thermo	couple temperature rise	
	Mean specimen centre	thermocouple temperature rise	
	Mean specimen surfac	e thermocouple temperature rise	5.4°C
	Mean duration of sust	ained flaming	0 seconds
	Mean mass loss		
DESIGNATION:	The material is NOT de Clause 3.4 of AS 1530.	eemed COMBUSTIBLE according to the 1-1994.	test criteria specified in
	and they are not intende	ur of the test specimens of the mater d to be the sole criterion for assessing	
	September 2015 of April 2016 without alte	TEST NUMBER: 1147 rations or additions.	76
Heherson Alarde Testing Officer	Brett F Team	Roddy Leader, Fire Testing and Assessments	
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	verside Corporate Park, No 90 5444 Facsimile: 61 2 94	rth Ryde NSW 2113 AUSTRALIA 190 5555 www.csiro.au	CSIRO

Aluminium Core Panel

ULTRACORE Aluminium Core Panel has been tested to AS 1530.1 by NATA accredited CSIRO and the laminas did not flame or increase the temperature by more than 50° C = PASS.

Accordingly, the ULTRACORE laminas, including the core, were not deemed COMBUSTIBLE as per criteria (A), the first of the criteria for a bonded laminated material to be DTS non-combustible as per C1.9(e)(vii).





NATA Assessment to Confirm Adhesive Thickness as per C1.9(e)(vii)(B) is Recommended

- NATA Assessment
- To confirm glue thickness
- Max. 1mm per layer
- Max. 2mm total



	Ce	rtificate	of Te	st
Quote No.: NZ7601				REPORT No.: FNE
AS/NZS 153		OUS DETERMINATION		Y, FLAME PROPAGATION,
TRADE NAME:	Ultracore G2			
SPONSOR:	Blue Chip Group 62 Division Street Welshpool WA AUSTRALIA			
DESCRIPTION OF SAMPLE:	The sponsor described th of the following layers:	he tested specimen as an a	aluminium composit	e sandwich decorative panel cor
	Layer 2: 0.1-mm thicl Layer 3: 0.3-mm thicl	k aluminium face finished k adhesive film; k corrugated profiled alun k adhesive film;		
		k aluminium face finished		
		I together using an adhesi	ve film glue at an ap	plication rate of 96 g/m ² .
	Nominal total thickness: Nominal total mass: Colour:	4 mm 3.7 kg/m ² (measured); silver (exposed face co		ed by sponsor)
TEST PROCEDURE:	components and structu	res, Part 3: Simultaneous (determination of ign	530, Method for fire tests on itability, flame propagation, hea e specimen holder in four places
RESULTS:	The following means and	standard errors were obt	tained:	
	Parameter	Mean	Star	idard Error
	Ignition Time (min)	N/A		N/A
	Flame Spread Time (s			N/A
	Heat Release Integral			N/A
	Smoke Release (log10	D) -2.07	5	0.147
	For regulatory purposes	these figures correspond t	to the following indi	tes:
	Ignitability Index	Spread of Flame Index	Heat Evolved Index	Smoke Developed Index
	(0-20)	(0-10)	(0-10)	(0-10)
a full assessment of fi DATE OF TEST:		assess fire hazard, but it si ditions.		that a single test method will no 11459
fulade Heherson Alarde	-	Brett Roddy	1	
Testing Officer		Team Leader, Fire Testing	and Assessments	
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		Namber: 165 Corporate Site No 36 credited for compliance with	25	
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ULTRACORE Aluminium Core Panel has the glue applied as **<u>0.1mm dry-film</u>** layers so there is no way it can be thicker than stated. It is 10% (1/10th) of the NCC 2019 allowance.

Quote No.: NZ760	1 REPORT No.: FNE11680
AS/NZS 15	30.3:1999 SIMULTANEOUS DETERMINATION OF IGNITABILITY, FLAME PROPAGATION, HEAT RELEASE AND SMOKE RELEASE
TRADE NAME:	Ultracore G2
SPONSOR:	Blue Chip Group 62 Division Street Welshpool WA AUSTRALIA
DESCRIPTION OF	
SAMPLE:	The sponsor described the tested specimentas an aluminitan composite sandwich decorative panel comprised of the following layers:
	Layer 1: 0.7-mm thick aluminium face finished with 30-µm thick surface finish; Layer 2: 0.1-mm thick adhesive film; Layer 3: 0.3-mm thick corrugated profiled aluminium core, expanded to 2.6-mm; Layer 4: 0.1-mm thick adhesive film;
	Layer 5: 0.5-mm thick aluminium face finished with 10-µm thick surface finish.
	The layers were adhered together using an adhesive film glue at an application rate of 96 g/m ² .
	Nominal total thicknose:4 mm
	Nominal total mass: 3.7 kg/m² (measured); 4.564 kg/m² (specified by sponsor) Colour: silver (exposed face coating)

Certificate of Test

The sponsor described the tested specimen as an aluminium composite sandwich decorative panel comprised of the following layers:

- 0.7-mm thick aluminium face finished with 30- μ m thick surface finish; Layer 1:
- 0.1-mm thick adhesive film; Layer 2:
- Layer 3: 0.3-mm thick corrugated profiled aluminium core, expanded to 2.6-mm;
- 0.1-mm thick adhesive film; Layer 4:
- 0.5-mm thick aluminium face finished with 10- μ m thick surface finish. Layer 5:

The layers were adhered together using an adhesive film glue an application rate of 96 g/m².



ULTRACORE



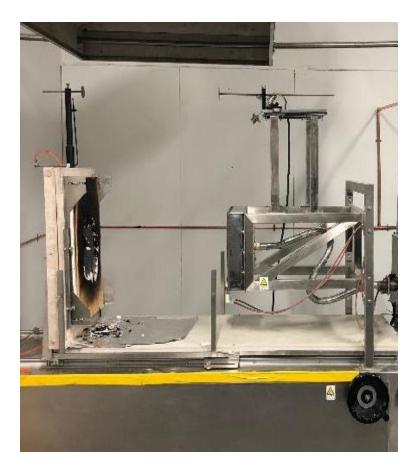
AS 1530.3 Test for Fire Hazard Properties is Required for DTS Compliance with C1.9(e)(vii)(C)

- AS 1530.3
- Fire Hazard Properties
- 0 for Spread-of-Flame
- 3 for Smoke-Developed



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	Cer	tificate	of Te	st	
Quote No.: NZ7601				REPORT No	o.: FNE11680
AS/NZS 1530).3:1999 SIMULTANEO HEAT	US DETERMINATIO		Y, FLAME PROPAGA	TION,
TRADE NAME:	Ultracore G2				
SPONSOR:	Blue Chip Group 62 Division Street Welshpool WA AUSTRALIA				
DESCRIPTION OF					
SAMPLE:	The sponsor described the of the following layers:				anel comprised
		aluminium face finished adhesive film;	l with 30-µm thick su	rface finish;	
		corrugated profiled alu	minium core expand	ed to 2.6-mm	
	Layer 4: 0.1-mm thick	adhesive film;			
	Layer 5: 0.5-mm thick	aluminium face finished	l with 10-µm thick su	rface finish.	
	The layers were adhered	together using an adhes	ive film glue at an ap	plication rate of 96 g/m ² .	
	Nominal total thickness: Nominal total mass:	4 mm			
	Nominal total mass: Colour:	 3.7 kg/m² (measured) silver (exposed face of 		ied by sponsor)	
TEST PROCEDURE	Six samples were tested			530 Method for fire to	ests on building
	components and structure and smoke release, 1999.	es, Part 3: Simultaneous	determination of ign	itability, flame propagati	on, heat release
RESULTS:	The following means and	standard errors were ob	tained:		
	Parameter	Mea	n Star	ndard Error	
	Ignition Time (min)	N/A		N/A	
	Flame Spread Time (s)	N/A		N/A	
	Heat Release Integral (kJ/m²) N/A		N/A	
	Smoke Release (log10D) -2.0	75	0.147	
	For regulatory purposes t	hese figures correspond	to the following indi	ces:	
	Ignitability	Spread of Flame	Heat Evolved	Smoke Developed	
	Index	Index	Index	Index	
	(0-20)	(0-10)	(0-10)	(0-10)	
	est may be used to directly a e hazard under all fire condi 12 August 2015	issess fire hazard, but it :			will not provide
Issued on the 4th day o	f April 2016 without alterati	ons or additions.			
Pulale	-	2			
-production		B. Roda			
Heherson Alarde Testing Officer	E T	rett Roddy 'eam Leader, Fire Testin	and Assessments		
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	e, Riverside Corporate Pa 9490 5444 Facsimile: 6				CSIRO



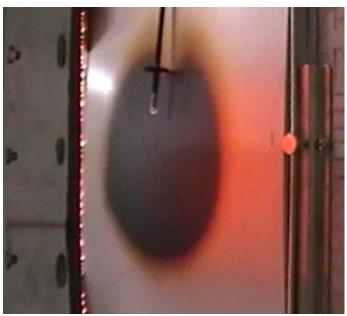
ULTRACORE - AS 1530.3 Test

As per the requirements of NCC 2019, this test involves the bonded laminate material as a whole being tested to AS 1530.3. Finished samples are mounted vertically in front of a radiant heat source to simultaneously determine;

- Ignitability Index = 0
- Spread-of-Flame Index = 0
- Heat Evolved Index = 0
- Smoke-Developed Index = 1

Ignitability Index	Spread of Flame Index	Heat Evolved Index	Smoke Developed Index
(0-20)	(0-10)	(0-10)	(0-10)
0	0	0	1









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ULTRACORE Results Table as per C1.9(e)(vii)

ULTRACORE Non-combustible Aluminium Core Panel

TEST	RESULT			
AS 1530.1*	Not deemed COMBUSTIBLE			
NATA Assessment**	Adhesive per Layer	0.1mm		
	Total Adhesive	0.2mm		
AS 1530.3***	Spread-of-Flame	0		
	Smoke-Developed	1		
*Refer CSIRO AS 1530.1 Certificate # **Refer CSIRO Assessment Number # ***Refer CSIRO AS 1530.3 Certificate	#: FCO-3188 #: FNE11680	INATA ULTRACORE		

SOLID is DTS compliant as per C1.9(e)(v)

- (e) The following materials may be used wherever a non-combustible material is required:
 - (i) Plasterboard.
 - (ii) Perforated gypsum lath with a normal paper finish.
 - (iii) Fibrous-plaster sheet.
 - (iv) Fibre-reinforced cement sheeting.
 - (v) Pre-finished metal sheeting having a *combustible* surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.
 - (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.
 - (vii) Bonded laminated materials where-
 - (A) each lamina, including any core, is non-combustible; and
 - (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and
 - (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.

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SOLID Aluminium Results as per C1.9(e)(v)

Non-combustible Solid Aluminium Panel

TEST	RESULT			
NCC 2019 C1.9(e)(v)	Deemed-to-Satisfy Non-combustible			
AS 1530.1*	Not deemed COMBUST	IBLE		
Paint Thickness	Less than 1mm	<0.05mm		
AS 1530.3**	Spread-of-Flame	0		
	Smoke-Developed	1		
*Refer CSIRO AS 1530.1 Certificate # **Refer AWTA AS 1530.3 Certificate				

UI TRASURE



Now we know that both products are **<u>'DTS'</u>** non-combustible, how else do they compare?





ULTRACORE

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Solid Aluminium Panel

Both offer the same general benefits.....

- Both products are DTS compliant for all buildings
- Excellent system for waterproofing with no practical alternatives in some applications
- Versatile colours, shapes and sizes
- 30+ years life expectancy with low maintenance (PVDF Coil Coating)
- Wrapped corners, parapets and facias
- Concealed fixing system
 - Excellent corrosion resistance
- Excellent structural strength and crack resistance
 - High rigidity to weight ratio, excellent flatness
 - Established skilled installer network
 - Same day cut-to-size for tight schedules



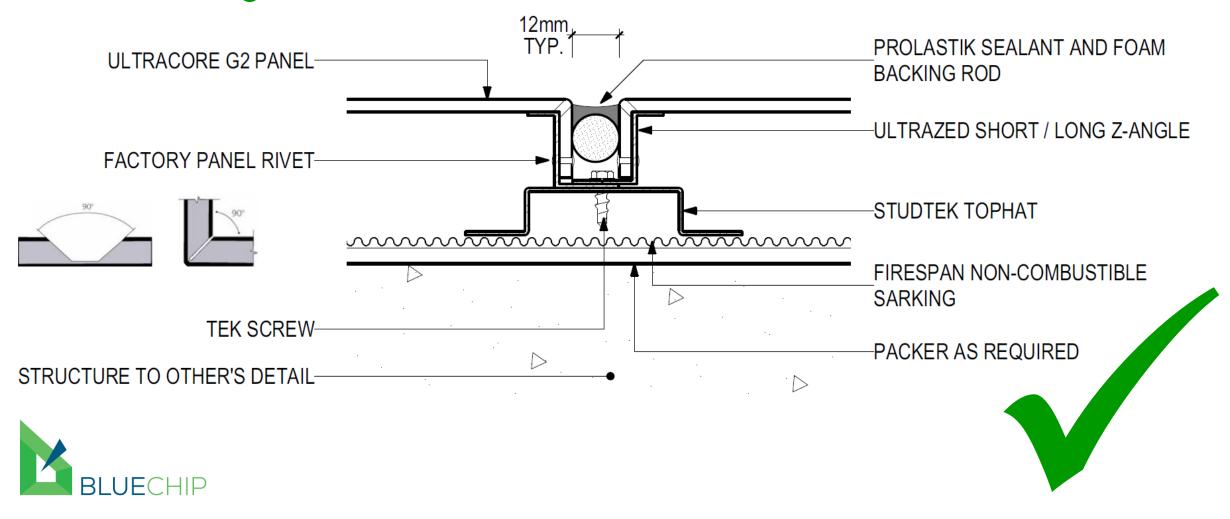


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Both use the same **<u>'DTS'</u>** installation system.....

Mechanical V-groove Cassette-fix System (Route & Return)

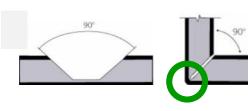


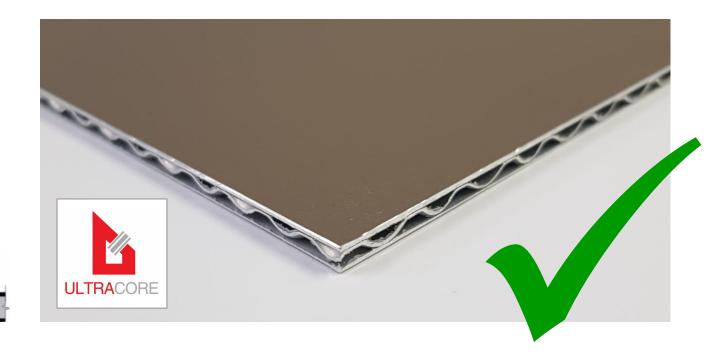
ULTRACORE Aluminium Core Panel



- DTS compliant for types A, B & C construction
- Category D insurance rating (lowest risk)
- All waste and cladding materials is 100% recyclable (NO landfill)
- 4kg/m2 total panel weight
 - Low debris quantity
 - Low thermal conductivity
 - Fast to fabricate
 - No risk of score-fractures during v-grooving



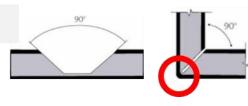




SOLID Aluminium Panel in Comparison

- > DTS compliant for types A, B & C construction
- Category D insurance rating (lowest risk)
- All waste and cladding materials is 100% recyclable
- > 8kg/m2 total panel weight
 - High debris quantity
 - High thermal conductivity
 - Slow to fabricate (\$\$\$)
 - High risk of score-fractures during v-grooving









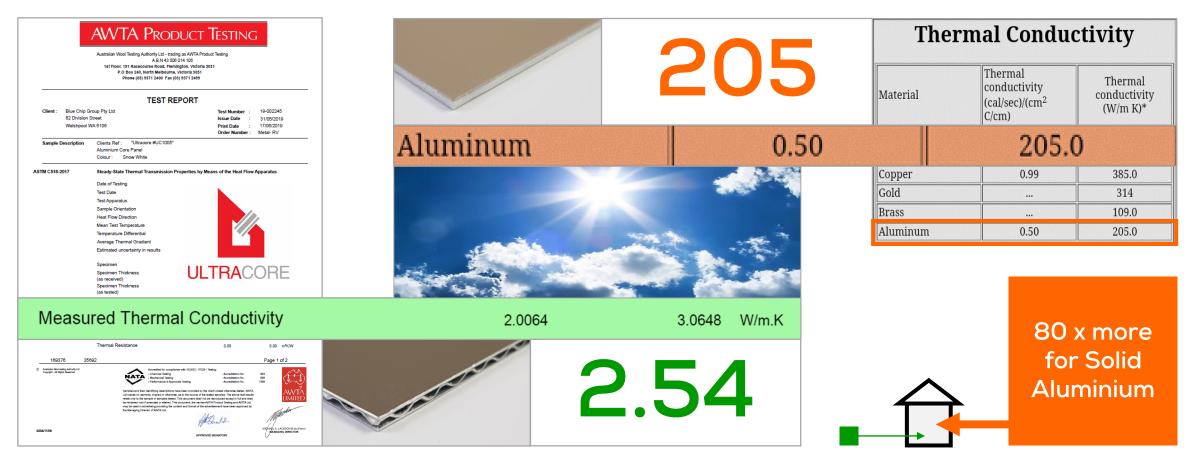
Comparison of Full-scale Testing Performance

AS 5113 TEST CRITERIA	ULTRACORE	SOLID ALUMINIUM	COMPARISON
5.4.5(a) Tw5m	<mark>483°C (Pass)</mark>	Exceeds 600°C (Fail)	SOLID Fails
5.4.5(b) Tcavity5m	<mark>152°C (Pass)</mark>	Exceeds 250°C (Fail)	SOLID Fails
5.4.5(b) Tinsulation5m	<mark>47°C (Pass)</mark>	Exceeds 250°C (Fail)	SOLID Fails
5.4.5(c) Tunexposedside0.9m	No Failure (Pass)	Exceeds 180°C (Fail)	SOLID Fails
5.4.5(d) Flaming	No Flaming (Pass)	No Flaming (Pass)	Equivalent (both pass)
5.4.5(d) Openings	No Openings (Pass)	No Openings (Pass)	Equivalent (both pass)
5.4.5(e) Spread	No Spread (Pass)	No Spread (Pass)	Equivalent (both pass)
5.4.5(f) Debris Flaming	Flaming Debris (Fail)	Flaming Debris (Fail)	Any Test with Sealant Fails This
5.4.5(g) Debris Mass	<mark>15.5kg (Fail)</mark>	46.4kg (Fail)	SOLID has 3 x more Debris



"While neither product requires this for compliance, ULTRACORE panel performs much better in full-scale testing"

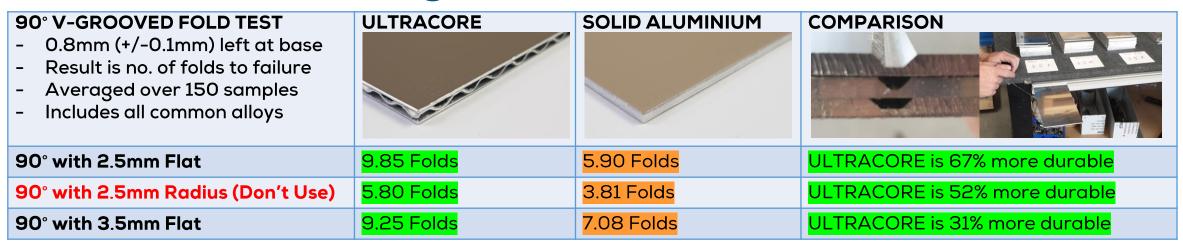
Comparison of Thermal Conductivity (W/mK)





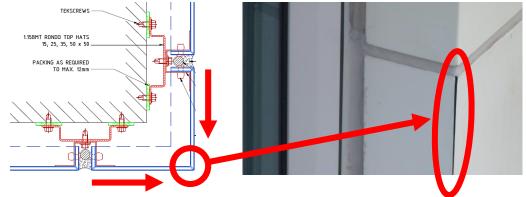
"ULTRACORE panel has 80 x lower rate of heat transfer into a building than Solid Aluminium panels"

Comparison of V-grooved Corner Durability



Things to consider when using solid aluminium:

Large expansion / contraction will be a factor
 It is difficult to monitor v-groove depth
 Strictly experienced CNC fabrication only
 Limit distance to joints for corners panels





"ULTRACORE panel is much less likely to crack on the corners due to no scoring and less thermal movement"

Comparison of Waterproofing Performance

Aluminium Core Panels – Proven System

This is because they have low thermal conductivity, similar to ACP's with millions of M2 installed globally over 40 years.

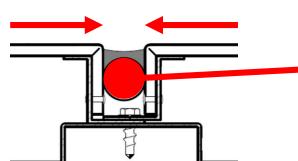
Solid Aluminium – Not so Proven

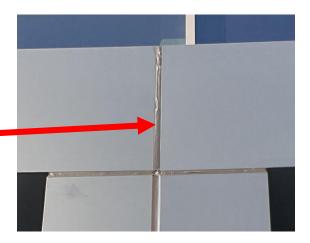
There is concern that the high expansion & contraction will result in future waterproofing issues due to sealant failure.

to

Solution: Reduce maximum panel sizes for Solid Aluminium.

"Decades of use prove that ULTRACORE panels will work with the cassette-fix system"









Comparison of Oil Canning Resistance

There is a reason why globally we moved away from solid aluminium to bonded laminates 40 years ago – they evenly distribute tension through the panel to prevent oil canning:

The mechanical properties of ULTRACORE panel evenly distribute tension across the panels to greatly reduce oil canning

A		
		51000
		1000

Oil canning is the visible waviness caused by uneven distribution of tension in a solid sheet material.

Solution: Increase number of stiffeners for Solid Aluminium.



"Bonded laminated materials evenly distribute tension through the panel to prevent oil canning"



ULTRACORE Benefits vs SOLID Aluminium

- All the benefits of other panels excluding rolling tighter than 2m radius*
- AS 5113 testing to prove 'real-world' fire safety NO fire spread
- > 80 x lower thermal conductivity for greater fire safety and section J compliance**
- > 1/3 the amount of debris in a fire scenario**
- Tried & tested durability on v-grooved corners**
 - Less stress on sealant for long-term waterproofing**
- Much greater resistance to oil canning**
- Much faster to fabricate = cost savings**
- 50% less weight for structural & labour savings**
 50% less carbon footprint**
 - ICA category D insurance rating (lowest risk)



*It can still be rolled tight by routing out the core as shown *Compared to Solid Aluminium panels



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CONCLUSION: While we can supply all options including both DTS aluminium panels and a steel-skin panel called ULTRASKIN, all the available testing & real-world evidence clearly shows that ULTRACORE panel offers the best outcomes across almost all key considerations.



ULTRACORE



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Solid Aluminium Panel

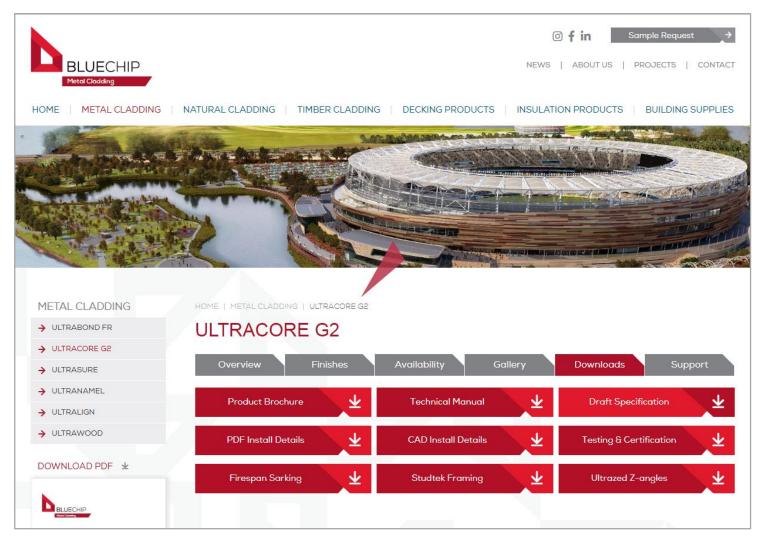
Which BLUECHIP Products are DTS Compliant?





www.bluechipgroup.net.au

How do I Specify Fully Compliant DTS Systems?





SPECIFICATION TEMPLATE ULTRACORE G2 Non-combustible Aluminium Core Panel

1. SCOPE OF WORK

The scope of work includes the design, supply, fabrication and installation ULTRACORE G2 Aluminium Cladding System, complete with all necessary sub-structures, anchors, hardware and fittings to provide a total installation and cladding system from the structure out.

2. MATERIAL AND FINISHES

Cladding Material:

Aluminium cladding material shall be supplied by Blue Chip Group Pty Ltd (Ph: 08 9451 2344) comprising of a 4mm thick composite panel with 0.7mm face skin and 0.5mm rear skins of aluminium sandwiching a non-combustible 2.8mm G2 core; ULTRACORE G2; 4mm, with minimum 3003 H16 aluminium alloy skins.

NO ALTERNATIVE MATERIALS WILL BE ACCEPTED FOR THIS PROJECT

Colour Selection:

Refer to exterior finishes schedule. (Select colour code/s from the Finishes tab at the below link) http://www.bluechiggroup.net.au/facade-cladding-perth/non-combustible-cladding-perth

Fire Properties:

Manufactured by Blue Chip Group Pty Ltd; ULTRACORE G2 is a DtS Non-Combustible product in accordance with the 2019 BCA/NCC.

ULTRACORE G2				
TEST STANDARD	RESULT			
AS1530.1	PASS (Deemed Non-combustible)			
AS1530.3	PASS	Ignitability Index	0	
	PASS	Heat Evolved	0	
	PASS	Spread of Flame	0	
	PASS	Smoke Developed	0-1	

Applied Finish:

The external panel surface shall be factory prefinished by the manufacturer with a Fluoropolymer coating of either PVDF or FEVE or combination of both applied through a continuous coil coating process. The coated surface shall need to exceed the minimum requirements of: AAMA 2605-11 "Voluntary Specifications, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminium Extrusions and Panels" or EN13523 "Coil Coated Metals – Test Methods" Application of the Fluoropolymer coating system by means of spray coating before or after forming and shaping of the cladding elements shall not be permitted.

Protective Peel Off Foil:

The finished surface shall be factory protected with a self-adhesive UV stabilised peel-off foil to protect the applied finish during fabrication, delivery and installation processes and shall not be removed until panels have been installed.

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Thanks Sincerely for your Time and Attention...



To claim <u>1 formal CPD point</u> please hand in your CPD attendance & assessment form or email it to; sales@bluechipgroup.net.au

