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Build With Confidence



Metallic Coated Structural ZINCALUME® G550 steel MC S G550S steel

Revision 10, November 2003
This literature supersedes all previous issues

GENERAL DESCRIPTION

ZINCALUME® G550 steel is a hot-dipped zinc/aluminium alloy – coated structural steel with a spangled surface and a guaranteed minimum yield strength of 550 MPa with limited ductility. Suitable for roll forming to a minimum internal diameter of 4t.

ZINCALUME® G550S steel is skinpassed to improve surface quality. Skinpassed material is used to supply COLORBOND® steel and is not available without the COLORBOND® paint finish.

TYPICAL USES

Roll-formed decking and walling.

AUSTRALIAN STANDARDS

AS 1365
AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM	CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Yield Strength, MPa	550	Carbon (C)	0.2
Tensile Strength, MPa	550	Phosphorus (P)	0.04
Elongation on 80mm (≥ 0.60mm) %	2	Manganese (Mn)	1.2
		Sulphur (S)	0.03

Note – tensiles tested in longitudinal direction

COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
AZ150	2t
AZ200	2t

FIRE HAZARD PROPERTIES

IGNITABILITY INDEX	(range 0-20)	0
SPREAD OF FLAME INDEX	(range 0-10)	0
HEAT EVOLVED INDEX	(range 0-10)	0
SMOKE DEVELOPED INDEX	(range 0-10)	0-1

DIMENSIONAL CAPABILITIES

Thickness Ranges mm		Max. Width mm
≥ 0.30 < 0.32		1070
≥ 0.32 < 0.33		1100
≥ 0.33 < 0.35	G550/ G550S	1150
≥ 0.35 < 0.40		1220
≥ 0.40 ≤ 0.60		1235
> 0.60 ≤ 1.00		1220

Slitting and shearing available on request from BlueScope Steel sales offices.

These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Steel Sales and Marketing confirmation.

NORMAL/OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Coating Class	AZ150	AZ200
Surface Condition	Spangled	–
Surface Treatment	Passivated/ Resin coated	–
Tolerance Class		
Dimensions	A Class	B Class
Flatness	A Class	–
Branding	Branded	–

Important Notes

Material should be used promptly (within 6 months) to avoid the possibility of storage related corrosion.

For selection of the most appropriate metallic coated steel, please refer to technical bulletins TB1a, TB1b, CTB21 and CTB22.

Mechanical properties are guaranteed at ambient/room temperatures. Please consult technical representatives at BlueScope Steel Sales office for high/low temperature use.

ZINCALUME® and COLORBOND® are registered trade marks of BlueScope Steel Limited.
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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																									
	560	570	580	590	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	
0.35																										
0.42																										
0.48																										
0.55																										
0.75																										
1.0																										

Key	yield strength	tensile strength
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Thickness mm	Total Elongation on 80mm (%)												
	0	1	2	3	4	5	6	7	8	9	10	11	12
0.35													
0.42													
0.48													
0.55													
0.75													
1.0													

FABRICATING PERFORMANCE

Method	Rating
Bending	1
Drawing	NR
Pressing	NR
Roll-Forming	3
Welding (design must allow for some strength reduction near welds)	4
Painting (Pretreatment)	5

TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	%
Carbon (C)	0.035 - 0.070
Phosphorus (P)	0.00 - 0.02
Manganese (Mn)	0.20 - 0.30
Sulphur (S)	0.00 - 0.02
Silicon (Si)	0.00 - 0.02
Aluminium (Al)	0.02 - 0.07
Nitrogen (N)	0.000 - 0.008

where 1 = limited to 5 = excellent, or NR = not recommended

IMPORTANT NOTES:

- Typical Mechanical Properties are based on typical product dispatched to customers. Note that ductility will decline through a natural aging process during storage and/or paint stoving cycle.
- The Skin-Passing of ZINCALUME® G550S steel will generally give a marginally higher yield strength and marginally reduced % elongation.

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COLORBOND® steel

Designed for: Exterior Roofing and Walling

Revision 7, November 2003
This literature supersedes all previous issues

GENERAL DESCRIPTION

COLORBOND® pre-painted steel, specifically designed by BlueScope Steel Limited to provide a high durability, premier cladding and roofing material for general use.

GENERAL DESCRIPTION

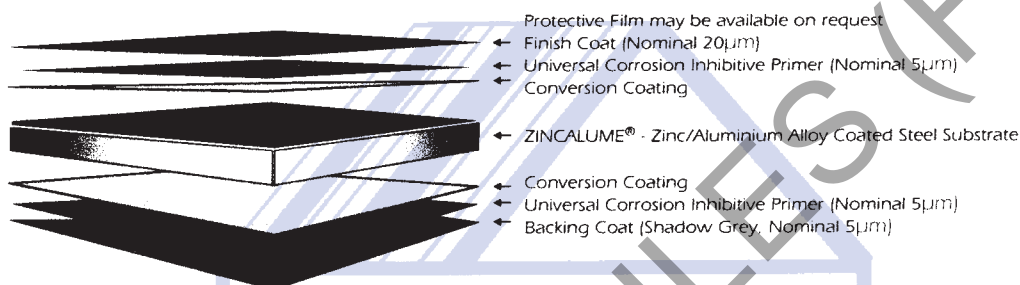
Roofing and accessories, wall cladding, rain water goods.

AUSTRALIAN STANDARD

Substrate – AS 1397
Paint Coating – AS/NZS 2728:1997 Type 3-4

PREFERRED SUBSTRATES ZINCALUME® G550S AZ150 steel
ZINCALUME® G300S AZ150 steel

Please refer to current price list or BlueScope Steel Limited State Sales Office for availability of colours and dimensions.



The finish coat can, if required, be applied to both sides to provide a 'double sided' product. The product is supplied with a nominal 25% (60°) gloss.

The protective film (CORSTRIP®) should be removed from the painted steel strip immediately on installation. Sunlight can increase adhesion of the protective film to the painted surface if left uncovered outside. Refer to brochure 'The smart way to design, install and maintain COLORBOND® steel.'

LINE TESTED PROPERTIES

Property	Measured By	Test Method	Results
Hardness	Pencil	AS/NZS 1580 405.1 NCCA Tech. Bull. 4.2.5	HB or harder
Adhesion	Reverse Impact	AS/NZS 2728 (App. E) NCCA Tech. Bull. 4.2.6	≥10 joules
	T-bend	AS/NZS 2728 (App. F) NCCA Tech. Bull. 4.2.8	Maximum 5T
Specular gloss	60° meter	AS/NZS 1580 602.2 ASTM D523	15-35%

EXPECTED PRODUCT SERVICE PERFORMANCE

Property	Measured After	Test Method	Results
Resistance to colour change	QUV (2000 hours)	ASTM G53	Δ E Hunterlab: Intermediate colour: ≤5 unit, eg Wheat
	Natural well washed exposure (15 years)	ASTM D2244	Δ E Hunterlab: Light colour: ≤6 units Int. colour: ≤9 units Dark colour: ≤15 units
Resistance to chalking	QUV (2000 hours)	ASTM G53 AS/NZS 1580 481.1.11 (Method B)	Rating: ≤4
	Natural well washed exposure (10 years)	AS/NZS 1580 481.1.11 (Method B)	Chalk rating: ≤4
Resistance to corrosion	Salt spray (1000 hours)	ASTM B117 AS 2331.3.1 NCCA Tech. Bull. 5.4.6	Blister density: ≤2 Blister size: ≤S2 Undercut from a score: ≤2mm No loss of adhesion
	Kesternich (SO ₂) (50 cycles)	DIN 50018	Edge creep: <4mm
Resistance to humidity	Cleveland (1000 hours)	NCCA Tech. Bull. 5.4.5	Blister density: ≤2 Blister size: ≤S2 No loss of adhesion
Resistance to acids	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering



COLORBOND® steel

Designed for: Exterior Roofing and Walling

Continued

Revision 7, November 2003
This literature supersedes all previous issues

EXPECTED PRODUCT SERVICE PERFORMANCE (cont.)

Property	Measured After	Test Method	Results
Resistance to alkalis	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Resistance to solvents	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Adhesion	Natural well washed exposure (15 years)	–	No flaking or peeling
Resistance to heat	Exposure 100°C continuous	ASTM D2244	Colour change Δ E Hunterlab: ≤3 units
Resistance to fire	Exposure	AS/NZS 1530.3	Ignitability index: 0 rating in scale of 0-20 Spread of flame index: 0 rating in scale of 0-10 Heat evolved index: 0 rating in scale of 0-10 Smoke evolved index: 0-1 rating in scale of 0-10
Flexibility	T-bend	AS 2935 (App. E) NCCA Tech. Bull. 4.2.8	Maximum 7T (no cracking)
Resistance to abrasion	Taber Abraser - 1000g CS 10 wheels	AS/NZS 1580 403.2 NCCA Tech. Bull. 4.2.5	≤20mg per 100 cycles
	Scratch	AS/NZS 1580 403.1	Typically 2000g

NOTE

- ① For selection of the most appropriate COLORBOND® steel product refer to 'Steel Roofing Products – Selection Guide Technical Bulletin TB - 1a', and 'Steel Walling Products – Selection Guide Technical Bulletin TB - 1b'.
- ② Values quoted are for standard colours of COLORBOND® steel under normal well washed conditions of exposure. Product may not be suitable if it is intended to use COLORBOND® steel in an exterior application within 1km of salt marine locations, severe industrial or abnormally corrosive environments, or in applications where it will be wholly or partly buried in the ground. Before purchase, you should check on suitability through contacting your nearest BlueScope Steel Limited Sales office for advice.
- ③ COLORBOND® steel has good resistance to accidental spillage of solvents such as methylated spirits, white spirit, mineral turpentine, toluene, trichloroethylene and dilute mineral acids and alkalis. However, all spillages should be immediately removed by water washing and drying.
- ④ For most products, the metallurgical ageing process which is inherent in the paint stoving cycle will result in some loss of ductility compared with unpainted product. However, minimum strength levels designated by relevant standards will still be applicable.
- ⑤ Improper storage or the use of non-approved roll-forming lubricants may adversely affect colour. Material which becomes wet while in stacks or bundles must be separated and dried (refer AS/NZS 2728 Appendix K).
- ⑥ The Backing coat is not recommended for exposure to direct sunlight. Where the reverse side will be exposed to direct sunlight, the "double sided" product is recommended.

⑦ Definitions

- Finish coat - the coating applied to the exposed surface of the prepainted coil or sheet which is expected to meet the Performance Requirements.
- Backing coat - a thin (pigmented or clear) coating applied to the reverse or unexposed surface of the prepainted coil or sheet for the purpose of protection against damage to the topcoat during shipment and storage. It also gives additional durability to the reverse or unexposed surface during the service life of the product. Performance Requirements are not generally applicable to Backing coats. Where specific Performance Requirements are deemed necessary for the reverse surface coating "double sided" product should be specified, in which case a topcoat of full nominal thickness will be applied.

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COLORBOND® Ultra steel

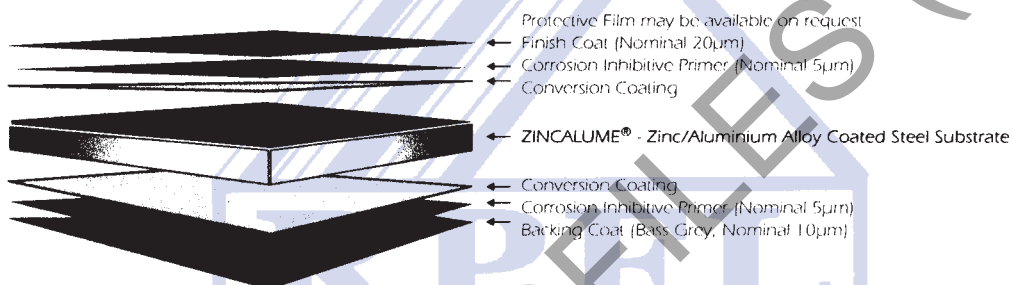
Designed for: Exterior Roofing and Walling

Revision 3, November 2003
This literature supersedes all previous issues

<p>GENERAL DESCRIPTION</p> <p>COLORBOND® Ultra prepainted steel, specifically designed by BlueScope Steel Limited, combines long term durability and exceptional corrosion resistance.</p>	<p>TYPICAL USES</p> <p>Exterior building profiles in applications requiring excellent corrosion resistance. Suited to moderately severe marine and industrial environments (typically 100-200m from the source of the severe environment).</p>
	<p>AUSTRALIAN STANDARD</p> <p>Substrate – AS 1397 Paint Coating – AS/NZS 2728:1997 Type 3-4</p>

PREFERRED SUBSTRATES ZINCALUME® G550S AZ200 steel
ZINCALUME® G300S AZ200 steel

Please refer to current price list or BlueScope Steel Limited State Sales Office for availability of colours and dimensions.



The finish coat can, if required, be applied to both sides to provide a 'double sided' product. The product is supplied with a nominal 25% (60°) gloss.

The CORSTRIP® protective film should be removed from the painted steel strip immediately on installation. Sunlight can increase adhesion of the protective film to the painted surface if left uncovered outside. Refer to the brochure 'The smart way to design, install and maintain COLORBOND® steel.'

LINE TESTED PROPERTIES

Property	Measured By	Test Method	Results
Hardness	Pencil	AS/NZS 1580 405.1 NCCA Tech. Bull. 4.2.5	HB or harder
Adhesion	Reverse Impact	AS/NZS 2728 (App. E) NCCA Tech. Bull. 4.2.6	≥10 joules
	T-bend	AS/NZS 2728 (App. F) NCCA Tech. Bull. 4.2.8	Maximum 5T
Specular gloss	60° meter	AS/NZS 1580 602.2 ASTM D523	15 - 35%

EXPECTED PRODUCT SERVICE PERFORMANCE

Property	Measured After	Test Method	Results
Resistance to colour change	QUV (2000 hours)	ASTM G53	Δ E Hunterlab: Intermediate colour: ≤5 unit
	Natural well washed exposure (15 years)	ASTM D2244	Δ E Hunterlab: Light colour: ≤6 units Int. colour: ≤9 units Dark colour: ≤15 units
Resistance to chalking	QUV (2000 hours)	ASTM G53 AS/NZS 1580 481.1.1.1 (Method B)	Rating: ≤4
	Natural well washed exposure (10 years)	AS/NZS 1580 481.1.1.1 (Method B)	Chalk rating: ≤4
Resistance to corrosion	Salt spray (2000 hours)	ASTM B117 AS 2331.3.1 NCCA Tech. Bull. 5.4.6	Blister density: ≤2 Blister size: ≤S2 Undercut from a score: ≤2mm No loss of adhesion
	Kesternich (SO ₂) (50 cycles)	DIN 50018	Edge creep: <4 mm
Resistance to humidity	Cleveland (1000 hours)	NCCA Tech. Bull. 5.4.5	Blister density: ≤2 Blister size: ≤S2 No loss of adhesion



COLORBOND® Ultra steel

Designed for: Exterior Roofing and Walling

Continued

Revision 3, November 2003
This literature supersedes all previous issues

EXPECTED PRODUCT SERVICE PERFORMANCE

Property	Measured After	Test Method	Results
Resistance to acids	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Resistance to alkalis	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Resistance to solvents	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Adhesion	Natural well washed exposure (15 years)	–	No flaking or peeling
Resistance to Heat	Exposure 100°C continuous	ASTM D2244	Colour change: Δ E Hunterlab: ≤3units
Resistance to Fire	Exposure	AS/NZS 1530.3	Ignitability index: 0 rating in scale of 0-20 Spread of flame index: 0 rating in scale of 0-10 Heat evolved index: 0 rating in scale of 0-10 Smoke evolved index: 0-1 rating in scale of 0-10
Flexibility	T-bend Forming Temp	AS 2935 (App. E) NCCA Tech. Bull. 4.2.8	Minimum 8T (no cracking) Min Recommended 16°C
Resistance to abrasion	Taber Abraser – 1000g CS 10 wheels Scratch	AS/NZS 1580 403.2 NCCA Tech. Bull. 4.2.5 AS/NZS 1580 403.1	≤20mg per 100 cycles Typically 2000g

NOTE

- ① For selection of the most appropriate COLORBOND® steel product refer 'Steel Roofing Products – Selection Guide Technical Bulletin TB-1a', and 'Steel Walling Products – Selection Guide Technical Bulletin TB-1b'.
- ② Values quoted are for standard colours of COLORBOND® Ultra steel under normal well washed conditions of exposure. Product may not be suitable if it is intended to use COLORBOND® Ultra steel in an exterior application within 200 metres of salt marine locations, severe industrial or abnormally corrosive environments, or in applications where it will be wholly or partly buried in the ground. Before purchase, you should check on suitability through contacting your nearest BlueScope Steel Limited Sales office for advice.
- ③ COLORBOND® Ultra steel has good resistance to accidental spillage of solvents such as methylated spirits, white spirit, mineral turpentine, toluene, trichloroethylene and dilute mineral acids and alkalis. However, all spillages should be immediately removed by water washing and drying.
- ④ For most products, the metallurgical ageing process which is inherent in the paint stoving cycle will result in some loss of ductility compared with unpainted product. However, minimum strength levels designated by relevant standards will still be applicable.
- ⑤ Improper storage or the use of non-approved roll-forming lubricants may adversely affect colour. Material which becomes wet while in stacks or bundles must be separated and dried (refer AS/NZS 2728 Appendix K).
- ⑥ The Backing coat is not recommended for exposure to direct sunlight. Where the reverse side will be exposed to direct sunlight, the "double sided" product is recommended.
- ⑦ Definitions
 - Finish coat - the coating applied to the exposed surface of the prepainted coil or sheet which is expected to meet the Performance Requirements.
 - Backing coat - a thin (pigmented or clear) coating applied to the reverse or unexposed surface of the prepainted coil or sheet for the purpose of protection against damage to the topcoat during shipment and storage. It also gives additional durability to the reverse or unexposed surface during the service life of the product. Performance Requirements are not generally applicable to Backing coats. Where specific Performance Requirements are deemed necessary for the reverse surface coating "double sided" product should be specified, in which case a topcoat of full nominal thickness will be applied.

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COLORBOND® Stainless steel

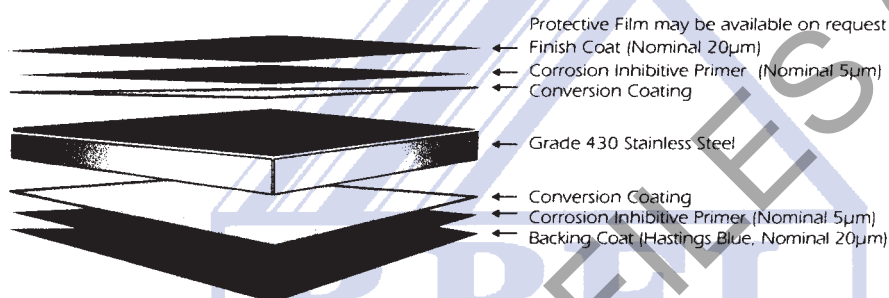
Designed for: Extreme Environments

Revision 6, November 2003
This literature supersedes all previous issues

<p>GENERAL DESCRIPTION</p> <p>COLORBOND® Stainless steel, specifically designed by BlueScope Steel Limited, provides the ultimate in corrosion resistance and weatherability in exterior applications.</p>	<p>TYPICAL USES</p> <p>Roofing and walling, particularly suited to severe marine and industrial environments in which it provides excellent gloss retention, colour stability, and corrosion resistance (typically within 100m of the severe environment).</p> <p>AUSTRALIAN STANDARD</p> <p>Substrate – AS 1449 Paint Coating – AS/NZS 2728:1997 Type 6</p>
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PREFERRED SUBSTRATES Grade 430 Stainless Steel available as 430SS550 and 430SS300.

Please refer to current price list or BlueScope Steel Limited State Sales Office for availability of colours and dimensions.



The product is supplied with a nominal 25% (60°) gloss.

The CORSTRIP® protective film should be removed from the painted steel strip immediately on installation. Sunlight can increase adhesion of the protective film to the painted surface if left uncovered outside. Refer to 'COLORBOND® – The smart way to design, install and maintain COLORBOND® steel.' brochure.

LINE TESTED PROPERTIES

Property	Measured By	Test Method	Results
Hardness	Pencil	AS/NZS 1580 405.1 NCCA Tech. Bull. 4.2.5	HB or harder
Adhesion	Reverse Impact	AS/NZS 2728 (App. E) NCCA Tech. Bull. 4.2.6	≥10 joules
	T-bend	AS/NZS 2728 (App. F) NCCA Tech. Bull. 4.2.8	Maximum 4T
Specular gloss	60° meter	AS/NZS 1580 602.2 ASTM D523	15 - 35%

EXPECTED PRODUCT SERVICE PERFORMANCE

Property	Measured After	Test Method	Results
Resistance to colour change	QUV (2000 hours)	ASTM G53	Δ E Hunterlab: Intermediate colour: ≤1 unit
	Natural well washed exposure (20 years)	ASTM D2244	Δ E Hunterlab: Light colour: ≤ 6 units Int. colour: ≤ 7 units Dark colour: ≤ 10 units
	Altrac 1 x 10 ⁶ Langley's	–	Δ E Hunterlab: ≤1 unit
Resistance to chalking	QUV (2000 hours)	ASTM G53 AS/NZS 1580 481.1.11 (Method B)	Rating: 0-1 range
	Natural well washed exposure (20 years)	AS/NZS 1580 481.1.11 (Method B)	Chalk rating: ≤ 2
Resistance to corrosion	Salt spray (2000 hours)	ASTM B117 AS 2331.3.1 NCCA Tech. Bull. 5.4.6	Blister density: ≤2 Blister size: ≤S2 Undercut from a score: ≤2 mm No loss of adhesion
	Kesternich (SO ₂) (50 cycles)	DIN 50018	Edge creep: Slight (≤1 mm) Blisters: Nil

COLORBOND® Stainless steel

Designed for: **Extreme Environments**

Continued

Revision 6, November 2003
This literature supersedes all previous issues

EXPECTED PRODUCT SERVICE PERFORMANCE (cont.)

Property	Measured After	Test Method	Results
Resistance to humidity	Cleveland (1000 hours)	NCCA Tech. Bull. 5.4.5	Blister density: ≤ 2 Blister size: ≤ 2 No loss of adhesion
Resistance to acids	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Resistance to alkalis	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Resistance to solvents	Exposure	ASTM D1308 (3.1.1)	No discolouration No blistering
Adhesion	Natural well washed exposure (20 years)	–	No flaking or peeling
Resistance to heat	Exposure 100°C continuous	ASTM D2244	Colour change ΔE Hunterlab: ≤ 3 units
Resistance to fire	Exposure	AS/NZS 1530.3	Ignitability index: 0 rating in scale of 0-20 Spread of flame index: 0 rating in scale of 0-10 Heat evolved index: 0 rating in scale of 0-10 Smoke evolved index: 0-1 rating in scale of 0-10
Flexibility	T-bend	AS 2935 (App. E) NCCA Tech. Bull. 4.2.8	Maximum 5T (no cracking)
Resistance to abrasion	Taber Abraser – 1000g	AS/NZS 1580 403.2	≤ 20 mg per 100 cycles
	CS 10 wheels	NCCA Tech. Bull. 4.2.5	
	Falling sand	–	60 litres/25 μ m
	Scratch	AS/NZS 1580 403.1	Typically 2000g

NOTE

- (1) For selection of the most appropriate COLORBOND® steel product refer to the following 'Steel Roofing Products – Selection Guide Technical Bulletin TB - 1a', and 'Steel Walling Products – Selection Guide Technical Bulletin TB - 1b'. Also refer to the brochure 'Steel yourself against severe environments - COLORBOND® Stainless & COLORBOND® Ultra Steel'.
- (2) Values quoted are for standard colours of COLORBOND® Stainless steel under normal well washed conditions of exposure. Before purchase, you should check on suitability through contacting your nearest BlueScope Steel Limited Sales Office for advice.
- (3) COLORBOND® Stainless steel has good resistance to accidental spillage of solvents such as methylated spirits, white spirit, mineral turpentine, toluene, trichloroethylene and dilute mineral acids and alkalis. However, all spillages should be immediately removed by water washing and drying.
- (4) For most products, the metallurgical ageing process which is inherent in the paint stoving cycle will result in some loss of ductility compared with unpainted product. However, minimum strength levels designated by relevant standards will still be applicable.
- (5) Improper storage or the use of non-approved roll-forming lubricants may adversely affect colour. Material which becomes wet while in stacks or bundles must be separated and dried (refer AS/NZS 2728 Appendix K).
- (6) The Backing coat is not recommended for exposure to direct sunlight. Where the reverse side will be exposed to direct sunlight, the "double sided" product is recommended.

(7) Definitions

- Finish coat -
- Backing coat -

the coating applied to the exposed surface of the prepainted coil or sheet which is expected to meet the Performance Requirements.

a thin (pigmented or clear) coating applied to the reverse or unexposed surface of the prepainted coil or sheet for the purpose of protection against damage to the topcoat during shipment and storage. It also gives additional durability to the reverse or unexposed surface during the service life of the product. Performance Requirements are not generally applicable to Backing coats. Where specific Performance Requirements are deemed necessary for the reverse surface coating "double sided" product should be specified, in which case a topcoat of full nominal thickness will be applied.

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Metallic Coated Structural ZINC HI-TEN® G450 steel G450S steel MC S

Revision 9, November 2003
This literature supersedes all previous issues

GENERAL DESCRIPTION

ZINC HI-TEN® G450 steel is a hot-dipped zinc-coated structural steel with a spangled surface and guaranteed minimum yield strength of 450 MPa. Suitable for roll-forming to a 4t minimum internal diameter:

ZINC HI-TEN® G450S steel is skinpassed to improve surface quality. This skinpassed product is only available up to 2mm thick.

TYPICAL USES

Purlins, structural decking, scaffolding.

AUSTRALIAN STANDARDS

AS 1365
AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM	CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Yield Strength (MPa)	450	Carbon (C)	0.20
Tensile Strength (MPa)	480	Phosphorus (P)	0.04
Elongation on 80mm (≥ 0.60 mm) %	9	Manganese (Mn)	1.20
90° transverse bend (L axis)	4t	Sulphur (S)	0.03

Note – tensiles tested in longitudinal direction

COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
Z100	0t
Z200	1t
Z275	2t
Z450	2t
Z600	3t

FIRE HAZARD PROPERTIES

IGNITABILITY INDEX	(range 0-20)	0
SPREAD OF FLAME INDEX	(range 0-10)	0
HEAT EVOLVED INDEX	(range 0-10)	0
SMOKE DEVELOPED INDEX	(range 0-10)	0

DIMENSIONAL CAPABILITIES

Thickness Ranges mm		Max. Width mm
≥ 1.50 ≤ 1.60	G450, G450S	1350
> 1.60 ≤ 1.80	G450, G450S	1235
> 1.80 ≤ 2.00	G450, G450S	1220
> 2.00 ≤ 2.50	G450	1200
> 2.50 ≤ 3.20	G450	1150

Slitting and shearing available on request from BlueScope Steel sales offices.

These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Steel Sales and Marketing confirmation.

NORMAL/OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Coating Class	Z275	Z200, Z450, Z600
Surface Condition	Spangled	Minimised spangle
Surface Treatment	Passivated	–
Tolerance Class		
Dimensions	A Class	–
Flatness	A Class	–
Branding	Branded	–

Important Notes

Material should be used promptly (within 6 months) to avoid the possibility of a storage related phenomena of galvanised coatings termed intergranular corrosion.

For selection of the most appropriate metallic coated steel, please refer to technical bulletins TB1a, TB1b, CTB21 and CTB22.

For storage, rollforming lubricant and other information please refer to the Technical Bulletins.

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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength/Proof Strength & Tensile Strength MPa																		
	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650
1.5																			
2.0																			
2.5																			
3.0																			

Key	yield strength	tensile strength
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Thickness mm	Total Elongation on 80mm (%)										
	8	9	10	11	12	13	14	15	16	17	
1.5											
2.0											
2.5											
3.0											

FABRICATING PERFORMANCE

Method	Rating
Bending	3
Drawing	NR
Pressing	NR
Roll-Forming	4
Welding (design must allow for some strength reduction near welds)	5
Painting (Pretreatment)	5

TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	%
Carbon (C)	0.035 - 0.070
Phosphorus (P)	0.00 - 0.02
Manganese (Mn)	0.20 - 0.30
Sulphur (S)	0.00 - 0.02
Silicon (Si)	0.00 - 0.02
Aluminium (Al)	0.02 - 0.07
Nitrogen (N)	0.000 - 0.008

where 1 = limited to 5 = excellent, or NR = not recommended

IMPORTANT NOTES:

- Typical Mechanical Properties are based on typical product dispatched to customers. Note that ductility will decline through a natural aging process during storage and/or paint stoving cycle.
- The Skin-Passing of ZINC HI-TEN® G450 steel will generally give a marginally higher yield strength and marginally reduced % elongation.

ZINC HI-TEN® is a registered trade mark of BlueScope Steel Limited.

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Metallic Coated Formable GALVABOND® MC F G2 steel G2S steel

Revision 8, November 2003
This literature supersedes all previous issues

GENERAL DESCRIPTION

GALVABOND® G2 steel is a hot-dipped zinc-coated commercial forming steel with a spangled surface, suitable for general manufacturing, widely available as distributor stock. Product is suitable for moderate drawing applications and is suitable for lockseaming up to 1.6mm thick.

GALVABOND® G2S steel is skinpassed to improve surface quality. Under normal storage conditions it will be free of fluting for 3 months after galvanising.

TYPICAL USES

Tube, Airconditioning ducts, Airconditioning Panels, Meter Box, Trailers, Partitioning Systems, Cable Trays, Scaffolding Planks, Rendering Mesh, Feeder Troughs.

AUSTRALIAN STANDARDS

AS 1365
AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM	CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Elongation on 80mm ($\geq 0.60\text{mm}$) %	27	Carbon (C)	0.1
180° transverse bend (L axis)	0t	Phosphorus(P)	0.025
Pittsburgh lock-seam ($\leq 1.6\text{mm}$)	Pass	Manganese (Mn)	0.45
		Sulphur (S)	0.03

Note – tensile tested in transverse direction

COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
Z100	0t
Z275	0t
Z450	1t
Z600	2t

FIRE HAZARD PROPERTIES

IGNITABILITY INDEX	(range 0-20)	0
SPREAD OF FLAME INDEX	(range 0-10)	0
HEAT EVOLVED INDEX	(range 0-10)	0
SMOKE DEVELOPED INDEX	(range 0-10)	0

DIMENSIONAL CAPABILITIES

Thickness Ranges mm		Max. Width mm
$\geq 0.3 < 0.32$	G2, G2S	1070
$\geq 0.32 < 0.35$	G2, G2S	1100
$\geq 0.35 < 0.40$	G2, G2S	1220
$\geq 0.40 \leq 0.45$	G2, G2S	1390
$> 0.45 \leq 0.50$	G2, G2S	1510
$> 0.50 \leq 1.85$	G2, G2S	1525
$> 1.85 \leq 1.90$	G2, G2S	1485
$> 1.90 \leq 1.95$	G2, G2S	1440
$> 1.95 \leq 2.00$	G2, G2S	1400
$> 2.00 \leq 3.20$	G2	1220

Slitting and shearing available on request from BlueScope Steel sales offices.

These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Steel Sales and Marketing confirmation.

NORMAL/OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Coating Class	Z275	Z100 Z450>0.35mm Z600>0.40mm
Surface Condition	Spangled	Minimised spangle
Surface Treatment	Passivated	Unpassivated (oiled)
Tolerance Class		
Dimensions	A Class	B Class
Flatness	A Class	B Class
Branding	Branded	

Important Notes

Material should be used promptly (within 6 months) to avoid the possibility of a storage related phenomena of galvanised coatings termed intergranular corrosion.

For selection of the most appropriate metallic coated steel, please refer to technical bulletins TB1a, TB1b, CTB21 and CTB22.

For storage, rollforming lubricant and other information please refer to the Technical Bulletins.

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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																						
	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	
0.35																							
0.55																							
0.75																							
0.95																							
1.15																							
1.55																							
1.95																							
2.4																							
2.95																							

Key yield strength tensile strength

Thickness mm	Total Elongation (%)																						
	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44				
0.35																							
0.55																							
0.75																							
0.95																							
1.15																							
1.55																							
1.95																							
2.4																							
2.95																							

FABRICATING PERFORMANCE

Method	Rating
Bending	5
Drawing	3
Pressing	3
Roll-Forming	5
Lock-Forming	5
Welding	5
Painting (Pretreatment)	5

TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	%
Carbon (C)	0.035 - 0.070
Phosphorus (P)	0.00 - 0.02
Manganese (Mn)	0.20 - 0.30
Sulphur (S)	0.00 - 0.02
Silicon (Si)	0.00 - 0.02
Aluminium (Al)	0.02 - 0.07
Nitrogen (N)	0.000 - 0.008

where 1 = limited to 5 = excellent, or NR = not recommended

IMPORTANT NOTES:

- Typical Mechanical Properties are based on typical product dispatched to customers. Note that ductility will decline through a natural aging process during storage and/or paint stoving cycle.
- The Skin-Passing of GALVABOND® G2 steel will generally give a marginally higher yield strength and marginally reduced % elongation.

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ROOFING & PROFILES

RPPF (FUJI) LTD



Metallic Coated Formable ZINCANNEAL® G2S steel MC F

Revision 8, November 2003
This literature supersedes all previous issues

GENERAL DESCRIPTION

ZINCANNEAL® G2S is a matte hot-dipped zinc/iron alloy-coated commercial forming steel with a skin-passed smooth surface suitable for direct-on painting. Some powdering of the coating may occur with severe deformation.

TYPICAL USES

Exposed painted panels, non-exposed automotive panels, washing machines, acoustic ceiling tiles, door frames, switchboards, commercial refrigerators and freezers.

AUSTRALIAN STANDARDS

AS 1365
AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Elongation on 80 mm (≥ 0.60 mm) %	27
180° transverse bend (L axis)	0t

Note – tensiles tested in transverse direction

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Carbon (C)	0.10
Phosphorus (P)	0.025
Manganese (Mn)	0.45
Sulphur (S)	0.03

FIRE HAZARD PROPERTIES

IGNITABILITY INDEX	(range 0-20)	0
SPREAD OF FLAME INDEX	(range 0-10)	0
HEAT EVOLVED INDEX	(range 0-10)	0
SMOKE DEVELOPED INDEX	(range 0-10)	0

DIMENSIONAL CAPABILITIES

Thickness Ranges mm	Max. Width mm
0.50 < 0.57	1525
≥ 0.57 < 1.00	1625
≥ 1.00 < 1.83	1525
≥ 1.83 < 1.90	1470
$\geq 1.90 \leq 2.00$	1400

Slitting and shearing available on request from BlueScope Steel sales offices.

These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Steel Sales and Marketing confirmation.

NORMAL/OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Coating Class	ZF100	45F45, 60F60, ZF80
Surface Condition	Smooth matte	–
Surface Treatment	Phosphated	Unphosphated (oiled)
Tolerance Class		
Dimensions	A Class	B Class
Flatness	A Class	B Class
Branding	Not Branded	–

Important Notes

Material should be used promptly (within 6 months) to avoid the possibility of a storage related corrosion.

For selection of the most appropriate metallic coated steel, please refer to technical bulletins TB1a, TB1b, CTB21 and CTB22.

For storage, rollforming lubricant and other information please refer to the Technical Bulletins.

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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																				
	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	
0.6																					
1.0																					
1.6																					
2																					

Key	yield strength	tensile strength
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Thickness mm	Total Elongation on 80mm (%)															
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
0.6																
1.0																
1.6																
2																

FABRICATING PERFORMANCE

Method	Rating
Bending	5
Drawing	3
Pressing	3
Roll-forming	5
Welding	5
Painting (Pretreatment)	5

TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	%
Carbon (C)	0.035 - 0.070
Phosphorus (P)	0.00 - 0.025
Manganese (Mn)	0.20 - 0.30
Silicon (Si)	0.00 - 0.02
Sulphur (S)	0.00 - 0.02
Aluminium (Al)	0.02 - 0.07
Nitrogen (N)	0.000 - 0.008

where 1 = limited to 5 = excellent, or NR = not recommended

IMPORTANT NOTES:

- Typical Mechanical Properties are based on typical product dispatched to customers. Note that ductility will decline through a natural aging process during storage and/or paint stoving cycle.
- This type of product is not suitable for painting in coil form and forming post painting as problems may be experienced with paint adhesion.

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