

Metallic Coated MC Structural S ZINCFORM® G300 steel G300S steel

Revision 8, November 2003

This literature supersedes all previous issues

GENERAL DESCRIPTION

ZINCFORM® G300 steel is a hot-dipped zinc-coated structural steel with a spangled surface and guaranteed minimum yield strength of 300 MPa, with good ductility. Suitable for roll-forming to an internal diameter of 1t minimum.

ZINCFORM® G300S steel is skinpassed to improve surface quality. This skinpassed product is only available up to 1.60mm thick.

TYPICAL USES

Roll-formed structural sections, nailplate.

AUSTRALIAN STANDARDS

AS 1365
AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Yield Strength, MPa	300
Tensile Strength, MPa	340
Elongation on 80mm (≥ 0.60 mm) %	18
180° transverse bend (L axis)	1t

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Carbon (C)	0.30
Phosphorus(P)	0.10
Manganese (Mn)	1.60
Sulphur (S)	0.035

Note – tensiles tested in longitudinal direction

COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
Z100	0t
Z200	0t
Z275	1t
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
≥ 0.30 < 0.32	G300, G300S	1010
≥ 0.32 < 0.35	G300, G300S	1100
≥ 0.35 < 0.40	G300, G300S	1220
≥ 0.40 ≤ 0.45	G300, G300S	1390
> 0.45 ≤ 0.50	G300, G300S	1510
> 0.50 ≤ 1.60	G300, G300S	1525
> 1.60 ≤ 2.90	G300	1220

Slitting and shearing available on request from BlueScope Steel sales offices. Thicknesses over 2.90 mm may be available on request.

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 ≥ 0.35 Z600 ≥ 0.40
Surface Condition	Spangled	Minimised spangle
Surface Treatment	Passivated	–
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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Please ensure you have the current data sheet for this product as displayed at www.bluescopesteel.com.au

BlueScope Steel Limited

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Produced by Artimprint (02) 9984 8586



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Continued

TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																						
	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	
0.3																							
0.6																							
0.95																							
1.2																							
2.0																							

Key yield strength tensile strength

Thickness mm	Total Elongation on 80mm (%)																					
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39				
0.3																						
0.6																						
0.95																						
1.2																						
2.0																						

FABRICATING PERFORMANCE

Method	Rating
Bending	5
Drawing	3
Pressing	2
Roll-Forming	5
Welding	5
Painting (Pretreatment)	5

TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	< 0.70 mm	0.70 ≤ 1.00	1.00 mm +
Carbon (C)	0.035 - 0.07	0.08 - 0.13	0.13 - 0.18
Phosphorus (P)	0.00 - 0.02	0.00 - 0.03	0.00 - 0.03
Manganese (Mn)	0.20 - 0.30	0.30 - 0.60	0.60 - 0.90
Silicon (Si)	0.00 - 0.02	0.00 - 0.03	0.00 - 0.03
Sulphur (S)	0.00 - 0.02	0.00 - 0.02	0.00 - 0.02
Aluminium (Al)	0.02 - 0.07	0.015 - 0.08	0.015 - 0.08
Nitrogen (N)	0.00 - 0.008	0.00 - 0.008	0.00 - 0.010

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 ZINCFORM® G300 steel will give a marginally higher yield strength and marginally reduced % elongation.

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