

# Metallic Coated MC Structural S ZINC HI-TEN® G550 steel G550S steel

Revision 9, November 2003

This literature supersedes all previous issues

## GENERAL DESCRIPTION

ZINC HI-TEN® G550 is a hot-dipped zinc-coated structural steel with a spangled surface and guaranteed minimum yield strength of 550 MPa. Suitable for roll-forming to a 4t minimum internal diameter under appropriate conditions.

ZINC HI-TEN® G550S is skinpassed to improve surface quality.

## TYPICAL USES

Roll-formed decking and walling, fencing posts and rails.

## AUSTRALIAN STANDARDS

AS 1365  
AS 1397:2001

## GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Yield Strength (MPa)	550
Tensile Strength (MPa)	550
Elongation on 80mm (≥ 0.60 mm) %	2

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Carbon (C)	0.20
Phosphorus (P)	0.04
Manganese (Mn)	1.20
Sulphur (S)	0.03

Note – tensiles tested in longitudinal direction

## COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
Z100	1t
Z200	2t
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
0.30 < 0.32	G550, G550S	1070
0.32 < 0.35	G550, G550S	1100
0.35 ≤ 0.70	G550, G550S	1220
> 0.70 ≤ 1.00	G550	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	Z200, Z450, Z600
Surface Condition	Spangled	–
Surface Treatment	Passivated	–
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 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](http://www.bluescopesteel.com.au)

## BlueScope Steel Limited

BlueScope Steel Limited ABN 16 000 011 058  
BlueScope Steel (AIS) Pty Ltd ABN 19 000 019 625

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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																		
	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790
0.42																			
0.6																			
0.8																			
1.0																			

<b>Key</b>	<span style="display: inline-block; width: 20px; height: 10px; background-color: #cccccc; border: 1px solid black;"></span> yield strength	<span style="display: inline-block; width: 20px; height: 10px; background-color: #333333; border: 1px solid black;"></span> tensile strength
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Thickness mm	Total Elongation on 80mm (%)										
	3	4	5	6	7	8	9	10	11	12	
0.42											
0.6											
0.8											
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)	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® G550 steel will generally give a marginally higher yield strength and marginally reduced % elongation.

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