

ZINC HI-TEN® G550 Steel

Revision 8

September 2008

This literature supersedes all previous issues



Metallic Coated - MC

Structural - S

GENERAL DESCRIPTION

"ZINC HI-TEN® G550 steel 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.

ZINC HI-TEN® G550S steel is skin passed to improve surface quality. This skin passed product is only available up to 2mm thick. "

TYPICAL USES

Roll formed decking and walling, fencing posts and rails.

AUSTRALIAN STANDARDS

AS/NZS 1365:1996 1

AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Longitudinal Tensile	
Yield Strength, Mpa	550 min
Tensile Strength, MPa	550 min
Elongation on 80mm %	2 min
180° transverse bend (L axis)	-

CHEMICAL COMPOSITION OF STEEL BASE

CHEMICAL PROPERTIES	GUARANTEED MAX %
Carbon - C	0.20
Phosphorus - P	0.04
Manganese - Mn	1.2
Silicon - Si	-
Sulphur - S	0.03
Aluminium - Al	-
Nitrogen - N	-

METAL COATING ADHESION - 180° BEND TEST

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

Where t is the diameter of mandrel in terms of thickness of product.

FIRE HAZARD PROPERTIES

INDEX	RANGE	RESULT
Ignitability Index	0-20	0
Spread Of Flame Index	0-10	0
Heat Evolved Index	0-10	0
Smoke Developed Index	0-10	0

DIMENSIONAL CAPABILITIES

THICKNESS RANGES (mm)	PRODUCT	MAX. WIDTH MM
0.30-0.31	G550, G550S	1070
0.32-0.34	G550, G550S	1100
0.35-0.70	G550, G550S	1220
0.71-1.00	G550	1220

Notes: 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. Slitting and shearing available on request from BlueScope Steel Sales Offices. For requirements outside the standard product range please contact your local Sales Office.

NORMAL/OPTIONAL SUPPLY CONDITIONS

	NORMAL	OPTIONAL
Coating Class	Z275	Z200
-		Z450
--		Z600
Surface Finish	Spangled	
Surface Treatment	Passivated	-
Tolerance Class	AS/NZS 1365:1996	
-Thickness	A Class	B Class
-Width	A Class	B Class
-Length	A Class	B Class
-Flatness	A Class	-
Branding	Branded	-

Important Notes

Optional supply conditions may be subject to dimensional restrictions

Australia 1800 800 789

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FABRICATING PERFORMANCE

METHOD	RATING	METHOD	RATING
Bending	1	Lock Forming	-
Drawing	NR	Welding	5
Pressing	NR	Painting Pretreatment	5
Roll Forming	3		

Where: 1 = Limited to 5 = Excellent or NR = Not Recommended

TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Yield Strength (MPa)		
	Minimum	Maximum
0.42	700	760
0.6	640	700
0.8	640	700
1	620	670

Tensile Strength (MPa)		
	Minimum	Maximum
0.42	730	790
0.6	690	750
0.8	650	720
1	630	670

Total Elongation (%)		
	Minimum	Maximum
0.42	4	7
0.6	5	8
0.8	6	10
1	8	11

IMPORTANT INFORMATION

Typical mechanical properties are based on typical product despatched to customers. Note that ductility will decline through a natural ageing process during storage and/or paint stoving cycle.

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Skin-Passing of GALVALUME® G250S Steel will generally give a marginally higher yield strength and marginally reduced % elongation.

Material should be used promptly (within six 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 lubricants and other information please refer to the Technical Bulletins.

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