

## Metallic Coated - MC

## Structural - S

### GENERAL DESCRIPTION

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

### TYPICAL USES

Roofing, walling and structural steel framing. For material selection advice, please contact your nearest BlueScope sales office.

### AUSTRALIAN STANDARD

AS1397

### MALAYSIAN STANDARD

MS1196

### GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM		TYPICAL*
	(0.42mm)	(> 0.60mm)	(0.42mm)
<b>Longitudinal Tensile, MPa</b>			
- Yield Strength, MPa	550	550	680 - 740
- Tensile Strength, MPa	570	570	680 - 740
- Elongation on 50mm, %	-	-	1 - 9
<b>Hardness, HR30T</b>	-	-	75 - 85

#### Notes

\* Typical mechanical properties are based on aggregation of  $x$  and 2SD performance.

### CHEMICAL COMPOSITION OF STEEL BASE

CHEMICAL PROPERTIES	GUARANTEED MAX %
Carbon - C	0.25
Phosphorus - P	0.045
Manganese - Mn	1.15
Sulphur - S	0.04

### METAL COATING ADHESION - 180° BEND TEST

COATING CLASS	
AZ150	2t
AZ200	2t

#### Notes

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

### FIRE HAZARD PROPERTIES – AS/NZS1530.3

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	0-1

### DIMENSIONAL CAPABILITIES\*

PREFERRED BASE METAL THICKNESS, mm	MAXIMUM WIDTH, mm
0.30	914
0.35, 0.40, 0.55	1219
0.42, 0.48, 0.50, 0.60	1230
0.70, 0.75, 0.80, 0.90, 1.00, 1.20	1219

#### Notes

\* These dimensions are a reflection of technical capability to produce. Any other sizes may be available on request.

Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Sales and Marketing confirmation.

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

### NORMAL/OPTIONAL SUPPLY CONDITIONS

	NORMAL	OPTIONAL#
Coating Class	AZ150	AZ200
Surface Condition	Spangled	Skin Passed
Surface Treatment	Passivated & Resin Coated	Passivated & Non Resin Coated
Branding	Branded	Not Branded
Dimensions Tolerance*	Class A	-
Flatness Tolerance*	Class A	-

#### Notes

# Optional supply conditions may be subject to dimensional restrictions.

\* The dimensional tolerances for thickness, width flatness and camber shall be in accordance with the requirements of AS/NZS1365.

## FABRICATING PERFORMANCE

METHOD	RATING	METHOD	RATING
Bending	1	Roll Forming	3
Drawing	NR	Welding	4*
Pressing	NR	Painting Pretreatment	5

**Notes**

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

\* Welding design must allow for some strength reduction near welds

## IMPORTANT INFORMATION

Spangle variance from coil to coil is an inherent characteristic of metallic alloy coating process and will not affect the performance of the product. It is therefore not a cause for rejection.

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.

Material should be used promptly (within six months) to avoid the possibility of a storage related corrosion. Roll-forming mark does not affect the performance of ZINCALUME® steel. For selection of the most appropriate metallic coated steel, please refer to technical bulletins TB1a, TB1b, CTB21 and CTB22. For storage, roll-forming lubricants and other information, please refer to the Technical Bulletins.