

ZINCALUME® G450 steel with Activate™ technology

Revision 0 February 2013

This literature supersedes all previous issues



Metallic Coated - MC

Structural - S

GENERAL DESCRIPTION

ZINCALUME® G450 steel with Activate™ technology is a hot-dipped aluminium/zinc/magnesium alloy – coated structural steel with a regular spangle surface and a guaranteed minimum yield strength of 450 MPa with limited ductility. Suitable for roll forming to a minimum internal diameter of 4t.

TYPICAL USES

Structural sections

AUSTRALIAN STANDARDS

AS/NZS 1365:1996 1

AS 1397-2011

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Longitudinal Tensile	
Yield Strength, MPa	450
Tensile Strength, MPa	480
Elongation on 80mm ($\geq 0.60\text{mm}$)%	9
90° Transverse Bend (L axis)	4t

CHEMICAL COMPOSITION OF STEEL BASE

CHEMICAL PROPERTIES	GUARANTEED MAX %
Carbon - C	0.2
Phosphorus - P	0.04
Manganese - Mn	1.2
Sulphur - S	0.03

METAL COATING ADHESION - 180° BEND TEST

COATING CLASS	
AM125	2t

Where t = 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	0-1

DIMENSIONAL CAPABILITIES

THICKNESS RANGES (mm)	PRODUCT	MAX. WIDTH MM
1.50 - 1.60		1000

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	AM125	
Surface Condition	Spangled	
Surface Treatment	Passivated & Resin coated	
Branding	Branded	Not branded
Tolerance Class		
Dimensions	Class A	Class B
Flatness	Class A	

Important Notes

Optional supply conditions may be subject to dimensional restrictions

Australia 1800 800 789

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Please ensure you have the current data sheet for this product as displayed at steelproducts.bluescopesteel.com.au



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FABRICATING PERFORMANCE

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

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

TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Yield Strength (MPa)		
	Minimum	Maximum
1.5 - 1.6	500	610

Tensile Strength (MPa)		
	Minimum	Maximum
1.5 - 1.6	560	630

Total Elongation on 80mm (%)		
	Minimum	Maximum
1.5 - 1.6	10	15

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.

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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