

# Metallic Coated Structural ZINCALUME® G300 steel

Revision 1, May 2004  
This literature supersedes all previous issues

## GENERAL DESCRIPTION

ZINCALUME® G300 steel is a hot-dipped zinc/aluminium alloy-coated structural steel with guaranteed minimum yield strength of 300 MPa with good ductility. Suitable for roll forming to a minimum internal diameter of 1t.

## TYPICAL USES

House framing, rainwater goods, gutters, garden sheds, roofing and cladding.

## STANDARDS

AS/NZS 1365:1996  
AS 1397:2001

## GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Yield Strength, MPa	300
Tensile Strength, MPa	340
Elongation on 50mm % (≥0.6mm)	20
180° transverse bend	1t

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %	
	≤0.80mm	>0.80mm
Carbon (C)	0.07	0.10
Phosphorous (P)	0.03	0.03
Manganese (Mn)	0.25	0.70
Sulphur (S)	0.03	0.03

## COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
AZ150	1t

Other coating classes may be available by enquiry

## 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)	0-1

## DIMENSIONAL CAPABILITIES

Thickness Ranges mm	Max. Width mm
≥ 0.350 < 0.390	1082
≥ 0.390 < 0.400	1193
≥ 0.400 < 0.951	1250
≥ 0.951 < 1.000	1230

Slitting and shearing available on request from New Zealand Steel.

**These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to New Zealand Steel Marketing confirmation. Other dimensional combinations may be available by enquiry.**

## NORMAL/OPTIONAL SUPPLY CONDITIONS

	NORMAL	OPTIONAL
Coating Class	AZ150	As above
Surface Condition	Spangled	-
Surface Treatment	Passivated & Resin coated	Oiled
Branding	Branded	Unbranded

## Important Notes

Material should be used promptly (within 6 months) to avoid the possibility of storage related corrosion.

Mechanical properties are guaranteed at ambient/room temperatures. Please consult technical representatives at New Zealand Steel for high/low temperature use.

In the as-oiled state long term corrosion resistance cannot be guaranteed. Further surface treatment/coating is required.

ZINCALUME® is a registered trademark of BlueScope Steel Limited.

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## TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																	
	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470
0.35																		
0.40																		
0.55																		
0.75																		
0.95																		

**Key**  yield strength  tensile strength

Thickness mm	Total Elongation on 50mm %																
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
0.35																	
0.40																	
0.55																	
0.75																	
0.95																	

### FABRICATING PERFORMANCE

Method	Rating
Bending	5
Drawing	2
Pressing	2
Roll-Forming	5
Welding	4
Painting (Pretreatment)	5

### TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	≤0.8mm	>0.8mm
Carbon (C)	0.035 - 0.070	0.06 - 0.100
Phosphorous (P)	0.01 - 0.02	0.00 - 0.02
Manganese (Mn)	0.14 - 0.25	0.50 - 0.70
Sulphur (S)	0.01 - 0.02	0.00 - 0.02
Silicon (Si)	0.00 - 0.03	0.00 - 0.02
Aluminium (Al)	0.03 - 0.07	0.03 - 0.07
Nitrogen (N)	0.004 - 0.007	0.004 - 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.

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