

Metallic Coated MC Formable F ZINCANNEAL® G3NS steel G3NS-E steel

Revision 6, November 2003

This literature supersedes all previous issues

GENERAL DESCRIPTION

ZINCANNEAL® G3NS is a matte hot-dipped zinc/ iron alloy – coated drawing steel guaranteed non-ageing and free from stretcher strain. It has a skin passed surface and is suitable for direct on painting. Some powdering of the coating may occur with severe deformation.

ZINCANNEAL® G3NS-E has a surface quality suitable for exposed automotive panels.

TYPICAL USES

Automotive panels and components.

AUSTRALIAN STANDARDS

AS 1365
AS 1397:2001

GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Elongation on 80 mm (≥ 0.60 mm) %	32
180° transverse bend (L axis)	0t

Note – tensiles tested in transverse direction

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Carbon (C)	0.08
Phosphorus (P)	0.02
Manganese (Mn)	0.40
Sulphur (S)	0.025

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
0.60 < 0.65	1300
≥ 0.65 ≤ 1.40	1620
> 1.40 ≤ 1.60	1200

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	45F45	60F60, ZF80, ZF100
Surface Condition	Smooth matte	–
Surface Treatment	Unphosphated (oiled)	Phosphated
Tolerance Class		
Dimensions	A Class	B Class
Flatness	A Class	–
Branding	Not Branded	–

Important Notes

Material should be used promptly (within 6 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 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

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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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																				
	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	
0.6																					
0.8																					
1.0																					
1.2																					
1.4																					
1.6																					

Key yield strength tensile strength

Thickness mm	Total Elongation on 80mm (%)															
	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
0.6																
0.8																
1.0																
1.2																
1.4																
1.6																

Thickness mm	Plastic Strain Ratio, R90													
	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7
0.6														
0.8														
1.0														
1.2														
1.4														
1.6														

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FABRICATING PERFORMANCE		TYPICAL CHEMICAL COMPOSITION OF STEEL BASE	
Method	Rating		%
Bending	5	Carbon (C)	0.00 - 0.010
Drawing	4	Phosphorus (P)	0.01 - 0.02
Pressing	4	Manganese (Mn)	0.10 - 0.20
Roll-Forming	5	Silicon (Si)	0.00 - 0.03
Lock-Forming	5	Sulphur (S)	0.01 - 0.02
Welding	5	Titanium	0.07 - 0.15
Painting (Pretreatment)	5	Nitrogen (N)	0.00 - 0.007

where 1 = limited to 5 = excellent, or NR = not recommended

IMPORTANT NOTES:

- Typical Mechanical Properties are based on typical product dispatched to customers.
- This type of product is not suitable for painting in coil form and forming post painting as problems may be experienced with paint adhesion.

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