

# Metallic Coated MC Structural S GALVSPAN® G450 steel

Revision 7, November 2003

This literature supersedes all previous issues

## GENERAL DESCRIPTION

GALVSPAN® G450 steel is a hot-dipped zinc-coated structural steel with a spangled surface and guaranteed minimum yield strength of 450MPa. Suitable for roll forming to a minimum internal diameter of 4t.

## TYPICAL USES

Roll-formed sections for structural applications.

## AUSTRALIAN STANDARDS

AS 1365  
AS 1397:2001

## GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED MINIMUM
Yield strength (MPa)	450
Tensile Strength (MPa)	480
Elongation on 80mm (≥ 0.60 mm) %	9
90° transverse bend (L axis)	4t

Note – tensiles tested in longitudinal direction

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %
Carbon (C)	0.20
Phosphorus (P)	0.04
Manganese (Mn)	1.20
Sulphur (S)	0.03

## COATING ADHESION – 180° BEND TEST

COATING CLASS	GUARANTEED
Z350	2t
Z450	2t

## 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
≥1.50 ≤ 1.60	1350
>1.60 ≤ 1.80	1235
>1.80 ≤ 2.00	1220
>2.00 ≤ 2.50	1200
>2.50 ≤ 3.20	1150

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	Z350	Z450
Surface Condition	Spangled	–
Surface Treatment	Passivated	–
Tolerance Class		
Dimensions	A Class	–
Flatness	A Class	–
Branding	Branded	–

## Important Notes

Material should be used promptly (within 6 months) to avoid the possibility of a storage related phenomena of galvanised coatings termed intergranular 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](http://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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Produced by Artimprint (02) 9984 8586



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# MC S

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**Continued**

## TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength/Proof Strength & Tensile Strength MPa															
	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630
1.5																
1.9																
2.4																
3.0																

**Key**  yield strength  tensile strength

Thickness mm	Total Elongation on 80mm (%)									
	8	9	10	11	12	13	14	15	16	17
1.5										
1.9										
2.4										
3.0										

### FABRICATING PERFORMANCE

Method	Rating
Bending	3
Drawing	NR
Pressing	NR
Roll-Forming	3
Welding (design must allow for some strength reduction near welds)	5
Painting (Pretreatment)	5

### TYPICAL CHEMICAL COMPOSITION OF STEEL BASE

	%
Carbon (C)	0.035 - 0.070
Phosphorus (P)	0.00 - 0.02
Manganese (Mn)	0.20 - 0.30
Sulphur (S)	0.00 - 0.02
Silicon (Si)	0.00 - 0.02
Aluminium (Al)	0.02 - 0.07
Nitrogen (N)	0.000 - 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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