

# Data Sheet

## G450



### Metal Coated – GALVSTEEL®

Revision: 23/04/2024

#### General Description

GALVSTEEL® 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.

#### Applications

- Structural & roll-formed sections

#### Standards

- AS 1397:2011
- AS/NZS 1365:1996

CHEMICAL COMPOSITION	TYPICAL (wt%)	EXPECTED MAXIMUM (wt %) [1]
Carbon (C)	0.020 - 0.050	0.050
Manganese (Mn)	0.14 - 0.22	0.220
Sulphur (S)	0.006 - 0.021	0.025
Phosphorus (P)	0.010 - 0.025	0.030
Silicon (Si)	0.00 - 0.02	0.025
Aluminium (Al)	0.02 - 0.06	0.060

[1] Values shown refer to relevant Australian / New Zealand standards unless tighter internal limits are applied.

MECHANICAL PROPERTIES	EXPECTED MINIMUM
Yield strength, MPa	450
Tensile strength, MPa	480
Elongation, % on Lo= 80mm (≥0.6mm)	9
90° transverse bend (L axis)	4t

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.

COATING ADHESION - 180° BEND TEST	
COATING CLASS	GUARANTEED
Z100	0t
Z200	1t
Z275	2t
Z350	2t
Z450	2t
Z600	3t

Other coating classes may be available by enquiry.

DIMENSION CAPABILITIES	
THICKNESS (mm)	WIDTH (mm)
1.50 – 1.75	70 – 1220
1.76 – 2.00	70 – 1220
2.01 – 2.40	70 – 1065

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.

FABRICATING PERFORMANCE	
1 = Limited 5 = Excellent NR= Not Recommended	
METHOD	RATING
Drawing	NR
Pressing	NR
Bending	3
Roll-forming	3
Welding	5*
Painting (Pre-treatment)	5

\*Design must allow for some strength reduction near welds.

AVAILABLE FINISHES		
	NORMAL	OPTIONAL
Surface Condition	Spangled	-
Surface Treatment	Passivated	-
Branding	Branded	Unbranded

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.



### Packing

Despatched material will be packed appropriately providing protection against weather and transit damage.

### Typical Property Ranges

THICKNESS (mm)	YIELD STRENGTH & TENSILE STRENGTH (MPa)											
	510	520	530	540	550	560	570	580	590	600	610	620
1.50												
1.75												
1.90												
2.00												
2.25												
2.40												

<b>KEY</b>	 Yield Strength (YS)	 Tensile Strength (UTS)
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THICKNESS (mm)	TOTAL ELONGATION (%) GL= 80mm							
	9	10	11	12	13	14	15	16
1.50								
1.75								
1.90								
2.00								
2.25								
2.40								

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