

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)	0.01 - 0.02	0.025
Phosphorus (P)	0.01 - 0.02	0.020
Silicon (Si)	0.00 - 0.02	0.025
Aluminium (Al)	0.03 - 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 L ₀ = 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.

DIMENSION CAPABILITIES	
THICKNESS RANGE (mm)	WIDTH RANGE (mm)
1.50 – 1.75	70 – 1220
1.76 – 2.00	70 – 1200

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.

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

Other coating classes may be available by enquiry

GALVSTEEL™ is a trademark of New Zealand Steel Limited.

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A BlueScope Steel Company

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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												

Key			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								

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