Coated Steel - Metallic
Data Sheet

November 2025 - This literature supersedes all previous issues

ZINC HI-TEN® steel G450 / G450S

General description

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

ZINC HI-TEN® steel G450S is skin passed to improve surface quality. This skin passed product is only available up to 2mm thick.



Typical uses

Purlins, structural decking, scaffolding.

Australian and International Standards

AS/NZS 1365:1996 (R2016)
AS 1397:2021
ISO 9001:2015 Quality System certified

Guaranteed properties of steel base

Mechanical properties	Guaranteed minimum
Yield Strength, MPa (longitudinal tensile)	450
Tensile Strength, MPa (longitudinal tensile)	480
Elongation on 80mm (≥ 0.60mm) %	9
180° Transverse Bend	4t

Chemical composition of steel base

Chemical properties	Guaranteed maximum %
Carbon – C	0.20
Manganese – Mn	1.20
Phosphorus – P	0.040
Sulphur – S	0.030

Metal coating adhesion – 180° bend test

Coating class	Result
Z100	0t
Z200	1t
Z275	2t
Z450	2t
Z600	3t

Where t = the diameter of mandrel in terms of thickness of product.

Dimensional capabilities

Thickness range (mm)	Width range (mm)
1.50 – 1.600	700 – 1525
1.61 – 2.000	700 – 1350
2.01 – 3.000	700 – 1225
3.01 – 3.200	700 – 1200
3.30 – 3.500	700 – 1000

Notes: Not every combination of thickness and width may be available. Supply conditions may be subject to dimensional restrictions and are subject to BlueScope Sales and Marketing confirmation. Slitting and shearing available on request from BlueScope Sales Offices. For requirements outside the standard product range please contact your local Sales Office. To determine maximum mill edge width available, subtract 30mm from the maximum width.

Fire hazard properties

Test & Evaluation Methods	Range	Result
Simultaneous determination of ignitability, flame propagation, heat release and smoke release (AS/NZS 1530.3:1999 (R2016)) *	Ignitability Index (0 – 20)	0
	Spread of Flame Index (0 – 10)	0
	Heat Evolved Index (0 – 10)	0
	Smoke Developed Index (0 – 10)	1
NCC non-combustible material (NCC 2022)	National Construction Code, Building Code of Australia 2022; Volume 1 Part C1, C2D10, (5)	Non-combustible

Supply conditions

Attribute	Normal	Optional
Coating Class	Z275	Z200, Z450, Z600 (by enquiry)
Surface Condition	Spangled	Minimised Spangle
Surface Treatment	Passivated	-
Branding	Branded	-
Tolerance – Dimensions	Class A	-
Tolerance – Flatness	Class A	-

Important Notes: Optional supply conditions may be subject to dimensional restrictions.

Fabricating performance

Method	Rating
Bending	3
Drawing	NR
Pressing	NR
Rollforming	4
Welding (design must allow for some strength reduction near welds)	5
Painting Pre-treatment	5

Where: 1 = Limited to 5 = Excellent or NR = Not Recommended
The ratings in this table are general indicators only, given as a guide to fabricating performance.

Important information

Skin-passing will generally give a marginally higher yield strength and marginally reduced % elongation.

Material should be used promptly (within six 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 lubricants and other information please refer to the Technical Bulletins.

The information contained in this datasheet is provided by way of general information about this product only, and has not been prepared with your specific needs in mind. We recommend that you seek BlueScope Steel Limited's advice as to the suitability of this product for the purpose(s) for which you propose to use it. To contact BlueScope Steel Limited for advice about your proposed use of this product, please contact Steel Direct. ZINC HI-TEN®, BlueScope and the BlueScope brand mark are registered trade marks of BlueScope Steel Limited. © 2025 BlueScope Steel Limited ABN 16 000 011 058. All rights reserved