

TRUECORE[®] steel with Activate[®] technology G450

General description

TRUECORE[®] steel G450 with Activate[®] technology is a hot-dipped aluminium/zinc/magnesium alloy-coated structural steel with a guaranteed minimum yield strength of 450MPa, manufactured using a blue tinted resin. It is designed for the residential house and commercial framing markets.

Typical uses

Structural residential house framing, structural commercial framing.

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 (≥ 0.60 mm) %	9
90° 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
AM150	2t

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

Dimensional capabilities

Thickness range (mm)	Max width (mm)
1.50 – 1.60	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.

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 concessions (NCC 2022; AS/NZS 1530.3:1999 (R2016)) *	National Construction Code, Building Code of Australia 2022; Volume 1 Part C1, C2D10, (5) and (6)(e) and Volume 2: Section H, Part H3, H3D2, (1)(e) AS/NZS 1530.3:1999 (R2016)	May be used wherever a non-combustible material is required
Combustibility test for materials (steel substrate) (AS 1530.1-1994 (R2016)) #	AS 1530.1-1994 (R2016)	Not deemed combustible (steel substrate)

* The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.

Supply conditions

Attribute	Normal	Optional
Coating Class	AM150	-
Surface Condition	Spangled	-
Surface Treatment	Passivated & Resin Coated	-
Branding	Branded	-
Tolerance – Dimensions	Class A	Class B
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
Lock Forming	NR
Welding (design must allow for some strength reduction near welds)	4
Painting Pre-treatment	NR

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

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.

Truecore[®]

truecore.com.au
steel.com.au

To learn more about this product

1800 738 576

steeldirect@bluescopesteel.com

For more information contact Steel Direct



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. TRUECORE[®], Activate[®], BlueScope and the BlueScope brand mark are registered trade marks of BlueScope Steel Limited. © 2023 BlueScope Steel Limited ABN 16 000 011 058. All rights reserved.