

# TRUECORE<sup>®</sup> steel with Activate<sup>®</sup> technology G450

## General description

TRUECORE<sup>®</sup> steel G450 with Activate<sup>®</sup> 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 (≥ 0.60mm) %	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 2019; AS/NZS 1530.3:1999 (R2016)) *	National Construction Code, Building Code of Australia 2019; Volume 1: Part C1.9.e, and Volume 2: Part 3.7.1.1.e	May be used wherever a non-combustible material is required
	AS/NZS 1530.3:1999 (R2016)	
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



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