

# Coated Steel – Metallic

## Data Sheet



August 2019. This literature supersedes all previous issues



# TRUECORE<sup>®</sup> steel

## with Activate<sup>®</sup> technology

### G450

#### General Description

TRUECORE<sup>®</sup> G450 steel 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 specifically designed for the residential house framing market.

#### Typical uses

Structural residential house framing.

#### Australian and International Standards

AS/NZS 1365:1996

AS 1397:2011

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, ( $\geq 0.60$ 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)	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)	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	
Combustibility test for materials (steel substrate) (AS 1530.1-1994)	AS 1530.1-1994	Not deemed combustible (steel substrate)

### 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
Roll Forming	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.

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