

ZINCALUME® G550 Steel

General description

ZINCALUME® G550 steel is a hot-dipped Al-Zn alloy coated structural steel with a regular spangle surface and guaranteed minimum yield strength of 550 MPa with limited ductility. Suitable for roll forming to a minimum internal diameter of 4t.

Typical Uses

Roofing, Cladding, Structural sections

Standard*

Certified Standard: IS 15961

Reference Standard : ASTM A 792M, ISO 9364, AS1397

Properties of Steel Base

Mechanical Properties	Guaranteed Minimum
Logitudinal Tensile	
Yield Strength, MPa	550
Tensile Strength, MPa	550
Elongation on 80 mm, %	-

For thickness => 0.60 mm Note: *AS 1397, **ASTM A792M, #IS 15961
On request, the steel can be produced with micro-alloying elements, such as Boron, either individually or in combination, up to a maximum limit of 0.006%.

Chemical Composition of Steel Base

Element	Guaranteed Max* (%)
Carbon (C)	0.25
Manganese (Mn)	1.7
Phosphorus (P)	0.050
Sulphur (S)	0.045

Values shown refer to relevant standard unless specifically agreed to
Other elements that are not harmful for the application may be present

Coating Class

Coating Class*	Minimum Coating - Total Both Surfaces, g/m2	
	Triple Spot Test	Single Spot Test
AZ15	150	135
AZ200	200	180

Coating Adhesion - 180° Bend Test

Coating Class	Guaranteed Minimum
AZ150 / AZ200	2t

Dimension Range & Tolerances

Range	Base Metal Thickness (mm)	
	Tolerance	
	Width ≤ 1200	Width > 1200
0.30 - 0.50	± 0.03	± 0.04
0.51 - 0.80	± 0.04	± 0.05
0.81 - 1.20	± 0.05	± 0.06
> 1.20	± 0.06	± 0.07

Range	Width (mm)	
	Tolerance	
< 900 (in slit edge)	+1 / -0	
914 - 1000	+4 / -0	
1001 - 1220	+5 / -0	

**For requirements beyond the standard product range & tolerance, please contact Tata Steel Colors Office

Fire Hazard Properties (AS/NZS 1530.3)

Index	Range	Rating
Ignitability Index	0-20	0
Spread of Flame Index	0-10	0
Heat Evolved Index	0-10	0
Smoke Developed Index	0-10	0-1

Supply Conditions

Supply Condition	Normal	Optional
Coating Class	AZ150**	AZ200***
Surface Condition	Spangled	-
Surface Treatment	Passivated and Resin coated	Passivated and Resin coated
Branding	Branded	Branded
Flatness Tolerance***	A Class	A Class

* Metallic coating of minimum 150 g/m2, ** Metallic coating of minimum 200 g/m2, *** Dimensional and shape tolerances as per IS/ISO 16163
where 1 = limited to 5 = excellent, NR = not recommended

Fabrication Performance

Method	Rating#	Method	Rating#
Drawing	-	Lock Forming/ Seaming	NR
Pressing	-	Welding	4
Bending	1	Painting	NR
Roll-forming	3		

where 1 = limited to 5 = excellent, NR = not recommended
Material should be used promptly (within 6 months) to avoid the possibility of improper storage related corrosion & change in performance due to ageing

Fabrication Performance

	Yield Strength (MPa)	
	Minimum	Maximum
0.35	580	710
0.42	570	700
0.60	560	700
1.00	550	670
1.20	550	650
	Tensile Strength (MPa)	
	Minimum	Maximum
0.35	600	790
0.42	590	770
0.60	590	760
1.00	580	700
1.20	580	680
	Total Elongation on 80 mm (%)	
	Minimum	Maximum
0.35	1	3
0.42	1	4
0.60	2	7
1.00	2	8
1.20	4	11

Note:

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