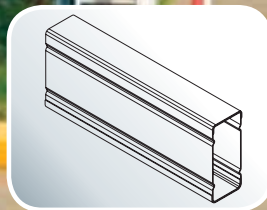
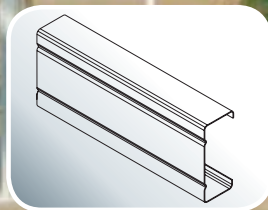
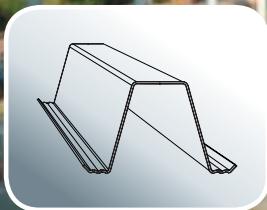
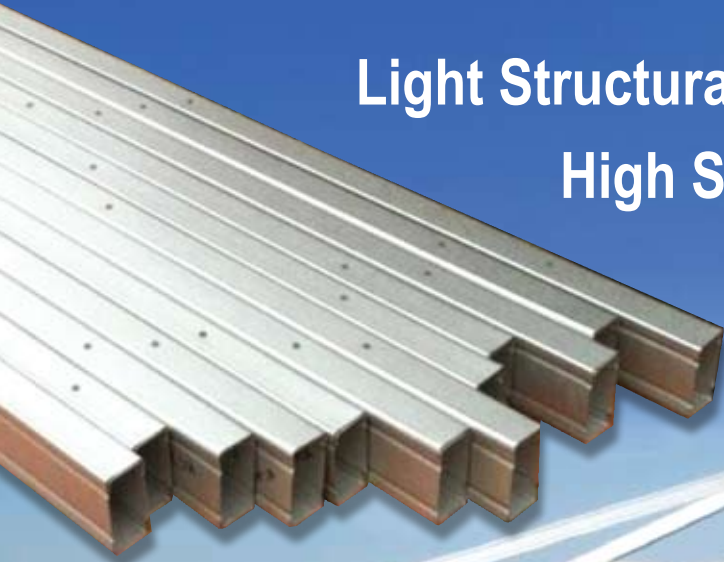


Light Structural Members made from High Strength ZINCALUME® steel



Product Benefits

- Excellent corrosion resistance
- Light-weight and strong
- Universal application
- Easy-to-erect by using connection clips
- Consistent straightness simplifies alignment
- Uniform in quality, does not warp or split
- No need of welding and painting

Tata BlueScope Steel is an equal joint venture between Tata Steel and BlueScope Steel, Australia, in the field of coated steel, steel building solutions and related building products. The Company operates in the South Asian Association for Regional Cooperation (SAARC) region. Its core values are Safety, Trust, Human Dignity and Excellence.

ZINCALUME® steel, the world's leading 55% Al-Zn Alloy coated steel, is the outcome of an extensive research into methods of improving the performance and lifespan of steel. Launched in 1976, ZINCALUME® steel has stood the test of time. It has an alloy coating of 55% Aluminium, 43.5% Zinc and 1.5% Silicon. The 150 g/m² coating weight is distributed equally on both surfaces of the coated strip. Metallic surface is then coated with separate layers of special passivation solution and resin (Figure 1).

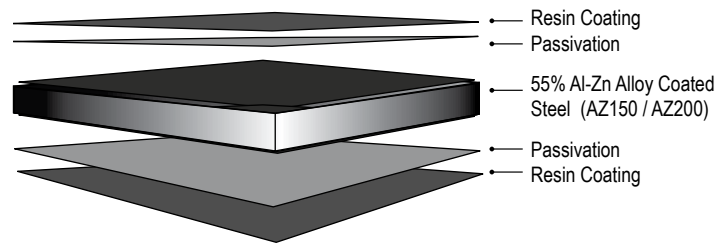


Figure 1: Cross section of ZINCALUME® steel

Table of Sectional Properties

Section	Dimensions	Web Thickness (BMT)	Web Thickness (TCT)	Full Sectional Area	Unit Weight	Moment of Inertia		Section Modulus		Torsion Constant
	D X W					(mm ²)	(Kg/m)	I _{xx} (mm ⁴)	I _{yy} (mm ⁴)	
	(mm X mm)	(mm)	(mm)	(mm ²)	(Kg/m)	I _{xx} (mm ⁴)	I _{yy} (mm ⁴)	Z _{xx} (mm ³)	Z _{yy} (mm ³)	J (mm ⁴)
SC07515	75 x 40	0.75	0.80	122	0.99	112700	23860	2998	879	23
SC07520	75 x 40	1.00	1.05	159	1.31	143109	26467	3772	1017	53
DC07515	75 x 40	0.75	0.80	262	2.00	329049	65792	7246	3214	49
DC07520	75 x 40	1.00	1.05	345	2.63	424103	85623	9412	4192	115
SC10020	100 x 50	1.00	1.05	216	1.73	362000	71330	7100	2070	72
DC10020	100 x 50	1.00	1.05	459	3.47	970048	193537	16562	7446	153
TS61	-	1.00	1.05	195	1.56	99800	157000	3239	3083	65
TS40	-	1.00	1.05	154	1.20	74820	38360	2043	1811	25

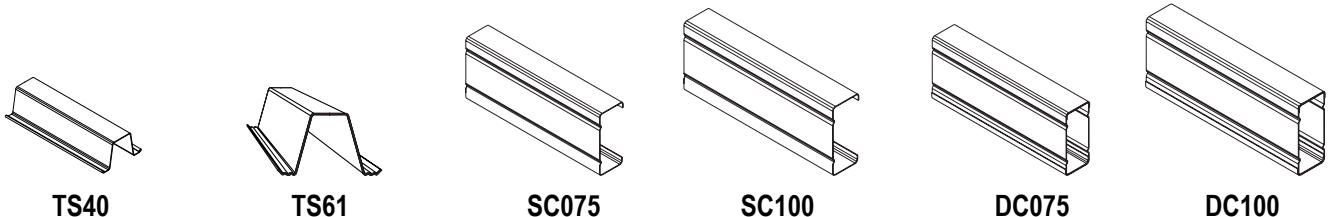
Identification

Example - **SC07515**

- xx = 2t X 10 mm
- xxx - Depth of Section in mm
- C - C Section
- S - Single (similarly, D - Double)

- TS - Top Span
- BMT - Base Metal Thickness
- TCT - Total Coated Thickness

Sections of Light Structural Members



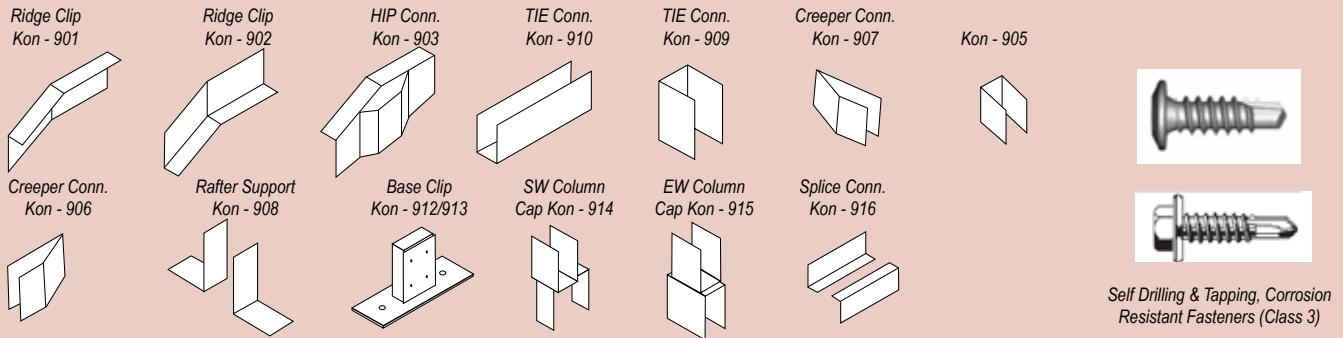
Material Specifications

Light structural members are made from 55% Al-Zn Alloy coated ZINCALUME® steel AZ150 G550 (550 MPa minimum yield strength), complying with AS 1397 and IS 15961.

Length

The sections can be made available in 3 m, 4 m, 5 m and 6 m standard lengths. Length of upto 12 m can be made available on request.

Connection Clips and Fasteners



Resistance to Atmospheric Corrosion

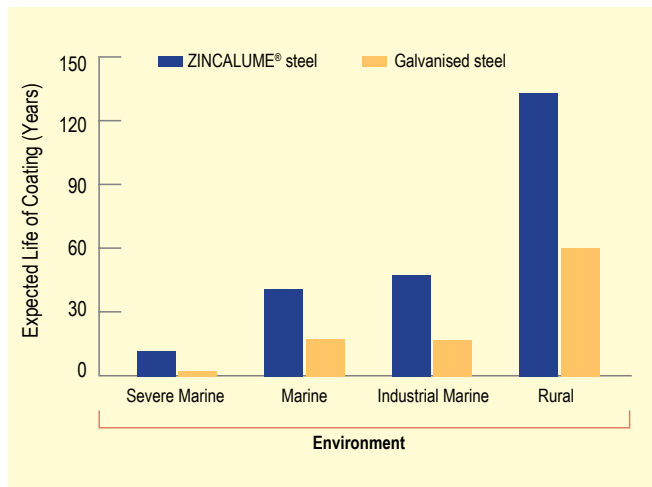


Figure 2: Comparative Coating Life Performance to Atmospheric Corrosion

ZINCALUME® steel (AZ150) outlasts Galvanised steel (Z275) by up to 4 times longer in similar environment conditions. The alloy coating of ZINCALUME® steel provides excellent corrosion resistance and has been found to possess greater resistance to cracking and peeling. ZINCALUME® steel combines both the galvanic protection of Zinc and barrier protection of Aluminium.

Figure 2 shows the coating life expectancy of ZINCALUME® steel compared to Galvanised steel after exposure at test sites ranging from severe marine to rural.

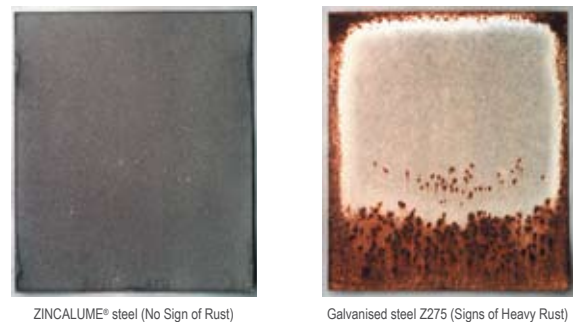


Bellambi Point, Australia

Samples on Test Racks

Figure 3: Outdoor Exposure Test Site - Bellambi Point, Australia

Outdoor Exposure Testing confirms that the corrosion performance of ZINCALUME® steel is far superior to that of Galvanised steel. After six years of severe marine exposure at BlueScope Steel's Bellambi Point site, ZINCALUME® steel is still in good condition, while Galvanised steel shows severe loss of coating and significant red rust of the steel substrate (Figure 3 and 4).

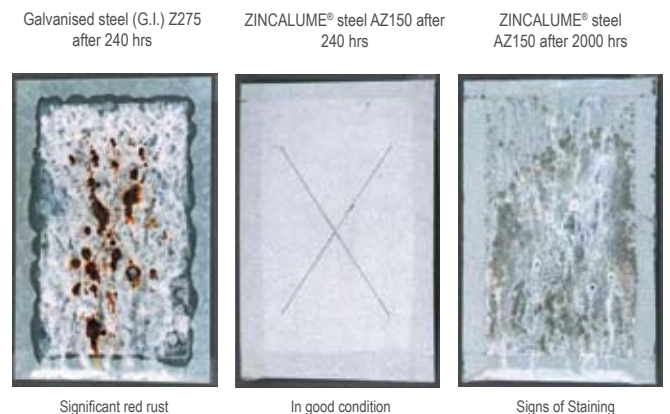


ZINCALUME® steel (No Sign of Rust)

Galvanised steel Z275 (Signs of Heavy Rust)

Figure 4: Product Performance after 6 years exposure

Laboratory salt spray tests were conducted in accordance to the ASTM test method B117 and AS1580. Results show that ZINCALUME® steel performs better compared to Galvanised steel after 240 hours of salt spray testing (Figure 5).



Significant red rust

In good condition

Signs of Staining

Figure 5: Salt Spray Performance of Galvanised steel v/s ZINCALUME® steel

Recommended Fasteners and Bolts

Application	Type of Fastener
Connections plate	Wafer head screw #10-16x16 without washer, complying with corrosion resistance class 3
	Hex. head screw #10-16x25 without washer, complying with corrosion resistance class 3
Bottom plate	Mechanical expansion bolt for foundation M12x100 Lg
	Galvanised Connection Bolts - M10 X100 Lg

Tools for Erection



Rotary Disk Cutter



Drill Gun

Application of Light Structural Members



Rooftop, Aluva, Ernakulam (Kerala)



Factory Extension, Chennai (Tamil Nadu)



Yoga Center, Malappuram (Kerala)



Portico cum Car Park for Temple, Ponneri (Tamil Nadu)



Test site, Tata BlueScope Plant, Sriperumbudur (Tamil Nadu)



Stock Yard (Under Construction), Palakkad (Kerala)



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