



INDUSTRIAL TUBE MANUFACTURING CO. LTD.

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Product Description: **G310 ERW Tube**

Base Material: **(G310 Metal-Coated – GALVSTEEL™)**

CHEMICAL COMPOSITION OF BASE MATERIAL

CHEMICAL COMPOSITION	TYPICAL (Wt %)	EXPECTED MAXIMUM (wt %)
Carbon (C)	0.170	0.194
Silicon (Si)	0.011	0.030
Manganese (Mn)	0.600	0.700
Sulphur (S)	0.015	0.030
Phosphorus (P)	0.013	0.030
Nitrogen (N)	0.005	0.0084

MECHANICAL PROPERTIES	TYPICAL			EXPECTED MINIMUM
	1.15mm	1.55mm	1.85mm	
Yield strength, MPa	338	342	318	310 min
Tensile Strength MPa	470	460	469	340 min
Elongation, % on L ₀ =50mm (>0.6mm)	30	40	35	20 min
180° transverse bend (L axis)	1t	1t	1t	1t

ZINC COATING

COATING CLASS	COATING
Z450	450 grams of zinc coat per square metre

SUPPLY CONDITIONS

The Supply Conditions below either meet or surpass the specifications listed below

Specification: Welded Steel Tubes for Mechanical Purposes (See AS 1450, or BS 6323) – Not for pressure purposes.

Surface Finish: Commercial quality surface finish, with the external weld flash removed to produce a smooth surface.

Thickness Tolerance: ± 8% of specified wall thickness.

Dimension Tolerance: Outside diameter of circular tube, or the measurement across opposite faces on non-circular product shall be up to ± 0.127mm

Length Tolerance: + 40mm – 0mm. (All tube is milled with an extra 50mm)

Rust Protection: Tube shall be coated with temporary corrosion preventative oil, designed to withstand corrosion when stored in normal conditions under cover for at least 3 months from the time of delivery.

Twist: Not to exceed 2mm plus 0.5mm per metre length, i.e. ≤ 4.775mm for a 5.550m length. (5.55 x 0.5) + 2.0 = 4.775

Straightness: Not more than 1.5 in 1000 of any length measured at the centre of that length, ie ≤ 8.3mm for a 5.550m length.

Squareness: Maximum permissible out-of-square of adjacent sides shall not exceed ± 1 degree.

Flatness: The actual dimensional variation across any face shall not exceed half the total outside dimensional tolerance.

Weld Location: For squares and rectangles generally within 0 to 8 mm as measured from the inside wall of the tube, with a 5 mm range from the nominal position. Larger squares and rectangles will have the nominal position further from the corner. Specific information on request.

Corner Radius: Information on request.

Weld Repair for Galvanized Tube. Battery acid strength sulphuric acid is applied by droplet onto the repaired welded. Minimum requirement is after 10 seconds, when the acid is wiped off, no base material is visible.

Storage: for long term storage filleting of product is recommended to minimize White Rust.