



**Industrial Tube**<sup>™</sup>

OUR PEOPLE DELIVER

**Roll Cage Tube - Technical Specification**

**Rev Date 15-07-2010**

<b>Standard Name</b>	MSNZ - Q29 - Seamed Steel Tubes for Safety Cages
<b>Standard Scope</b>	<i>This standard specifies requirements for production and supply of carbon tube of round cross-section produced by cold forming for use in motorsport vehicle safety cages and space frames.</i>
<b>Other supporting standards</b>	AS 1199.1 AS 1391 AS 2706 AS/NZS 1050.1
<b>Product Description</b>	38.1mm x 2.6mm Round C350 - Hot Rolled Pickled Tube 44.5mm x 2.6mm Round C350 - Hot Rolled Pickled Tube
<b>Grade Designation</b>	ITM - Q29 / C350 / ERW
<b>Material Specification</b>	NZSTEEL TUBE300 or equivalent standard
<b>Material Yield - Minimum</b>	250Mpa
<b>Material Tensile Strength - Minimum</b>	350Mpa
<b>Material Elongation - Minimum</b>	16%
<b>Sample Test</b>	A single length is taken from each batch
<b>Identification</b>	<i>Each batch should be marked or tagged with manufactures name and individual batch or heat number that matches test certificate</i>
<b>Manufacturing Tolerances (outside variation)</b>	plus or minus 0.20mm
<b>Manufacturing Tolerances (thickness)</b>	plus or minus 0.21mm
<b>Cold Flattening Test Results</b>	Flattening test required as per MSNZ standard clause 13.2
<b>Flare Test Result</b>	Flare test required as per MSNZ standard clause 13.3
<b>Chemical Composition - Carbon</b>	0.007 maximum (0.035 minimum)
<b>Chemical Composition - Silicon</b>	0.03 maximum
<b>Chemical Composition - Manganese</b>	0.25 maximum (0.140 minimum)
<b>Chemical Composition - Phosphorus</b>	0.03 maximum
<b>Chemical Composition - Sulphur</b>	0.08 maximum
<b>Chemical Composition - Aluminium</b>	0.03 maximum (0.030 minimum)