



## Aluminium Alloy - L80 'O' Sheet

### SPECIFICATIONS

Commercial	5251 - Obsolete
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#### Applications:

Nameplates, traffic (road) signs, architectural paneling. Welded tubes, chemical industry, irrigation. Offshore applications, welded structures. Pressure vessels, boilermaking.

#### Characteristic Properties:

Very good corrosion resistance to seawater and marine and industrial atmosphere. Very good weldability. Medium to high strength alloy for sheet products slightly lower than 5086. Medium high fatigue strength. Good cold formability.

### CHEMICAL COMPOSITION

BS 3L80(1985)  
Alloy L80

Element	% Present
Magnesium (Mg)	1.7 - 2.4
Iron (Fe)	0.5 max
Manganese (Mn)	0.1 - 0.5
Silicon (Si)	0.4 max
Chromium (Cr)	0.15 max
Copper (Cu)	0.15 max
Others (Total)	0.15 max
Titanium (Ti)	0.15 max
Zinc (Zn)	0.15 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

The material shall be supplied annealed (O).

### ALLOY DESIGNATIONS

Aluminium alloy BS L80 - 5251 is covered by standard BS EN 3L80 (1985)

### TEMPER TYPES

The most common tempers for L80 - 5251 aluminium are:

- O - Soft

### SUPPLIED FORMS

L80 - 5251 is supplied in the following forms:

- Sheet
- Strip

### GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.69 g/cm <sup>3</sup>
Melting Point	650 °C
Thermal Expansion	23.6 x10 <sup>-6</sup> /K
Modulus of Elasticity	70.0 GPa
Thermal Conductivity	149 W/m.K
Electrical Resistivity	37.5 % IACS

### MECHANICAL PROPERTIES

BS 3L80(1985)  
Sheet  
0.4mm to 2.6mm

Property	Value
Elongation A50 mm	18 Min %
Tensile Strength	160 Min - 200 Max N/mm <sup>2</sup>
0.2% Proof Stress	60 Min N/mm <sup>2</sup>

Mechanical properties relate to material with a nominal thickness of 0.4mm up to and including 2.6mm. The specification contains other values for different material thicknesses.



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### CONTACT

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### REVISION HISTORY

Datasheet Updated	09 January 2014
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