

SPECIFICATIONS

Commercial 3103

Applications:

Equipment for heating and cooling: heat exchangers, air condition evaporators, motor vehicle radiators, freezer linings, office equipment. Tubing, piping, containers, closures. Cladding alloy. Pressure vessels, aircraft and military components.

Characteristic Properties:

Very good resistance to atmospheric corrosion. Very good weldability. Good formability by pressing, drawing and roll forming. Medium strength alloy. Better mechanical properties (in particular at elevated temperatures) than 1xxx-alloys. Properties very close to those of 3003.

Precautions and Warnings:

Actual performance requires careful design of tools, lubrication and metal surface condition.

CHEMICAL COMPOSITION

BS 4L60(1985)
Alloy 4L60

Element	% Present
Manganese (Mn)	0.9 - 1.5
Iron (Fe)	0.7 max
Silicon (Si)	0.5 max
Magnesium (Mg)	0.3 max
Zinc (Zn)	0.2 max
Others (Total)	0.15 max
Copper (Cu)	0.1 max
Chromium (Cr)	0.1 max
Titanium + Zirconium (Ti+Zr)	0.1 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

The material shall be supplied cold rolled (H12) or cold rolled and partially annealed (H22).

ALLOY DESIGNATIONS

Aluminium alloy 4L60 - 3103 is covered by standard BS EN 4L60 (1985)

TEMPER TYPES

The most common tempers for 4L60 - 3103 aluminium are:

- H12 - Work hardened by rolling to quarter hard, not annealed after rolling
- H22 - Work hardened by rolling then annealed to quarter hard

SUPPLIED FORMS

4L60 - 3103 aluminium is supplied in the following forms:

- Sheet
- Strip

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.73 g/cm ³
Melting Point	655 °C
Thermal Expansion	23.1 x10 ⁻⁶ /K
Modulus of Elasticity	69.5 GPa
Thermal Conductivity	160 W/m.K
Electrical Resistivity	42 % IACS

MECHANICAL PROPERTIES

BS 4L60(1985)
Sheet
0.4mm to 0.8mm

Property	Value
Elongation A50 mm	5 Min %
Tensile Strength	120 Min - 145 Max N/mm ²

Mechanical properties relate to material with a nominal thickness of 0.4mm up to and including 0.8mm. The specification contains other values for different material thicknesses.

CONTACT

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REVISION HISTORY

Datasheet Updated	09 January 2014
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DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

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