

## Aluminium Alloy - 3103 H14/H24

Last Updated 13 November 2018

### SPECIFICATIONS

Commercial	3103
EN	3103

### CHEMICAL COMPOSITION

BS EN 573-3:2009 Alloy 3103	
Element	% Present
Manganese (Mn)	0.90 - 1.50
Iron (Fe)	0.0 - 0.70
Silicon (Si)	0.0 - 0.505
Magnesium (Mg)	0.0 - 0.30
Zinc (Zn)	0.0 - 0.20
Others (Total)	0.0 - 0.15
Chromium (Cr)	0.0 - 0.10
Copper (Cu)	0.0 - 0.10
Titanium + Zirconium (Ti+Zr)	0.0 - 0.10
Other (Each)	0.0 - 0.05
Aluminium (Al)	Balance

### ALLOY DESIGNATIONS

Aluminium alloy 3103 corresponds to the following standard designations and specifications **but may not be a direct equivalent:**  
ISO Al Mn1

### TEMPER TYPES

The most common tempers for 3103 aluminium are:

- H14 - Work hardened by rolling to half hard, not annealed after rolling
- H24 - Work hardened by rolling to half hard, annealed after rolling

### SUPPLIED FORMS

- Sheet
- Coil

### GENERIC PHYSICAL PROPERTIES

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

### MECHANICAL PROPERTIES

BS EN 485-2:2008 sheet 0.2mm to 6.00mm	
Property	Value
Proof Stress	120 Min MPa
Tensile Strength	140 - 180 MPa
Hardness Brinell	45 HB

Properties above are for material in the H14 condition

### WELDABILITY

Alloy 3103 has very good weldability.

### FABRICATION

Workability - Cold: Good  
Machinability: Acceptable  
Weldability - Gas: Very Good  
Weldability - Arc: Very Good  
Weldability - Resistance: Good  
Brazability: Very Good  
Solderability: Very Good

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