

SPECIFICATIONS

Commercial	3003
EN	3003

Aluminium alloy 3003 is a medium strength alloy with very good resistance to atmospheric corrosion and very good weldability as well as good cold formability. It has better mechanical properties, especially at elevated temperatures than the 1000 series alloys.

Applications - Alloy 3003 is typically used for:

Building industry: roofing and sidings, acoustic ceilings, corrugated sheets

Chemical and food industries: storage tanks, pipes, metal work

Equipment for heating and cooling: heat exchangers, air condition evaporators, motor vehicle radiators, freezer linings

Home appliances: cooking utensils, bakery moulds

Office equipment

Tube & Pipe

Packaging: containers, closures. Cladding alloy.

CHEMICAL COMPOSITION

BS EN 573-3:2009 Alloy 3003	
Element	% Present
Magnesium (Mg)	1.00 - 1.50
Hydrogen (H)	0.0 - 0.70
Silicon + Iron (Si+Fe)	0.0 - 0.60
Cobalt (Co)	0.05 - 0.20
Others (Total)	0.0 - 0.15
Zirconium (Zr)	0.0 - 0.10
Other (Each)	0.0 - 0.05
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy 3003 also corresponds to the following standard designations and specifications:

TEMPER TYPES

The most common tempers for 3003 aluminium are:

- O - Soft

SUPPLIED FORMS

Alloy 3003-0 is normally supplied as soft sheet

- Sheet

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	190 W/m.K
Electrical Resistivity	0.034 x10 ⁻⁶ Ω .m

MECHANICAL PROPERTIES

BS EN 485-2:2008 Sheet 0.2mm to 6.00mm	
Property	Value
Proof Stress	35 Min MPa
Tensile Strength	95 - 135 MPa
Hardness Brinell	28 HB

The properties above are for material in the soft 'O' condition

WELDABILITY

Alloy 3003 has very good weldability

FABRICATION

Workability – Cold: Very Good

Machinability: Acceptable

Weldability – Gas: Very Good

Weldability – Arc: Very Good

Weldability – Resistance: Good

Brazability: Very Good

Solderability: Very Good

CONTACT

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REVISION HISTORY

Datasheet Updated 13 November 2018

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