

Aluminium Alloy 3003 'O' Sheet



Amari Ireland Ltd

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

Address:	Please make contact directly with your local service centre, which can be found via the Locations page of our web site.
Web:	www.amari-ireland.com

REVISION HISTORY

Datasheet Updated	13 November 2018
-------------------	------------------

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.

Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

Advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. All transactions are subject to the Company's current Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.