Aluminium Alloy - L105 T4 Tube

SPECIFICATIONS

Commercial	2014A

Applications:
High strength tubing.

Characteristics:
Heat treatable alloy. High mechanical strength slightly higher than 2011 and 2017A.

CHEMICAL COMPOSITION

BS L105(1971)
Alloy L105

Element	% Present
Copper (Cu)	3.9 - 5
Manganese (Mn)	0.4 - 1.2
Silicon (Si)	0.5 - 0.9
Magnesium (Mg)	0.2 - 0.8
Iron (Fe)	0.5 max
Zinc (Zn)	0.2 max
Titanium + Zirconium (Ti+Zr)	0.2 max
Nickel (Ni)	0.2 max
Chromium (Cr)	0.1 max
Tin (Sn)	0.05 max
Lead (Pb)	0.05 max
Aluminium (Al)	Balance

Material shall be supplied treated, drawn and aged at room temperature.
Material shall be heat treated as follows:
1. Solution treat by heating at a temperature of 505+/- 5C and quenching in water at a temperature not exceeding 40C.
2. Age at room temperature for not less than 48 hours.

ALLOY DESIGNATIONS

Aluminium alloy L105 - 2014A is covered by Standard BS EN 2100 and has similarities to the following standard designations and specifications:
2014 / 2014A AMS 4121

TEMPER TYPES

The most common temper for L105 - 2014A aluminium tube is:

- T4 - Solution heat treated and naturally aged to a substantially stable condition

SUPPLIED FORMS

L105-2014A aluminium is supplied as tube

- Tube

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.80 g/cm³
Melting Point	640 °C
Thermal Expansion	22.8 x10^{-6} /K
Thermal Conductivity	134 - 135 W/m.K
Modulus of Elasticity	73 GPa

MECHANICAL PROPERTIES

BS L105(1971)
Tube

Property	Value
Proof Stress	290 Min MPa
Tensile Strength	400 Min MPa
Elongation A50 mm	10 Min %

Tube re-solutionised and naturally aged without cold drawing may be expected to have reduced machanical properties.

[1 OF 2] CONTINUED

Aluminium Alloy - L105 T4 Tube

CONTACT

Address:	Wilsons Ltd Nordic House Old Great North Road Huntingdon PE28 5XN
Tel:	+44 (0)1480 456421
Email:	sales@wilsonsmetals.com
Web:	www.wilsonsmetals.com

REVISION HISTORY

Datasheet Updated	07 January 2014

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.