

## SPECIFICATIONS

Commercial	2014A
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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/cm <sup>3</sup>
Melting Point	640 °C
Thermal Expansion	22.8 x10 <sup>-6</sup> /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 mechanical properties.

## CONTACT

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## REVISION HISTORY

Datasheet Updated 07 January 2014

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