

SPECIFICATIONS

Commercial 2014A

Applications: High strength drawn tubing.

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

CHEMICAL COMPOSITION

| BS 3L63(1971) Alloy 3L63 | |
|---------------------------------|-----------|
| 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 |
| Nickel (Ni) | 0.2 max |
| Zinc (Zn) | 0.2 max |
| Titanium + Zirconium (Ti+Zr) | 0.2 max |
| Chromium (Cr) | 0.1 max |
| Tin (Sn) | 0.05 max |
| Lead (Pb) | 0.05 max |
| Aluminium (Al) | Balance |

ALLOY DESIGNATIONS

Aluminium alloy 3L63 - 2014A is covered by standard BS EN 4L63 (1971)

TEMPER TYPES

The most common tempers for 3L63 - 2014A aluminium tubing is:

- T6 Solution heat treated and artificially aged
- H111 Some work hardening imparted by shaping processes but less than required for H11 temper

SUPPLIED FORMS

3L63 - 2014A aluminium is supplied as drawn tube • Tube

GENERIC PHYSICAL PROPERTIES

| Property | Value | |
|-----------------------|---------------------------|--|
| Density | 2.8 g/cm ³ | |
| Melting Point | 640 °C | |
| Thermal Expansion | 22.8 x10 ⁻⁶ /K | |
| Modulus of Elasticity | 73 GPa | |
| Thermal Conductivity | 134-155 W/m.K | |

MECHANICAL PROPERTIES

| BS 3L63(1971) Tube | |
|-----------------------|-------------|
| Property | Value |
| Proof Stress | 370 Min MPa |
| Tensile Strength | 450 Min MPa |
| Elongation A50 mm | 7 Min % |

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REVISION HISTORY

Datasheet Updated 07 January 2014

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