



## Aluminium Alloy - 3L63 T6 Tube

### 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 <sup>3</sup>     |
| Melting Point         | 640 °C                    |
| Thermal Expansion     | 22.8 x10 <sup>-6</sup> /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 %     |



## Aluminium Alloy - 3L63 T6 Tube

### CONTACT

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### REVISION HISTORY

|                   |                 |
|-------------------|-----------------|
| Datasheet Updated | 07 January 2014 |
|-------------------|-----------------|

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