

Grade 2014A aluminium is a heat treatable high strength alloy with a 4-5% copper addition. Produced in bar and profile it is supplied in the fully heat-treated condition for the optimum mechanical properties.

Normally stocked in the T6 condition (stress relieved and artificially aged) the 2014A offers a high strength vs. density and is commonly used in the aerospace and defence industries for the manufacture of aircraft structures, and truck frames. The general resistance to atmospheric attack is low, especially in marine environments. To improve the resistance against corrosion 2014A can be hard or protective anodised, coated or if in storage, lightly coat with Lanolin based protective Oil.

Chemical Composition

Aluminium	Rem	Silicon	0.5-0.9%
Copper	3.9 - 5.0%	Iron	0.5% max
Manganese	0.4 - 1.2%	Magnesium	0.2-0.8%
Zinc	0.25% max	Nickel	0.1% max
Titanium	0.15% max	Zirconium + Titanium	0.2% max
Chromium	0.1% max	Total Others	0.15 max

Related Specifications

2014A	HE15	L168
BS H15	A92014	W Nr. 3.1254 / 3.1255
AlCu4SiMg	AMS 4121	

Key Features

- Very Good Machining Properties
- Good Hard Anodising Capability
- Easily Plated
- Good Strength Levels after heat treatment.

Typical Physical Properties

Melting Range	530-610°C
Density	2.80 g/cm ³
Thermal conductivity	159 W/m ² K
Thermal expansion coefficient	22 x 10 ⁻⁶
Electrical Conductivity	38.3 IACS
Electrical resistivity	0.045 microhm m
Modulus of elasticity	74 GPa

Fabrication Properties

Cold Formability	Fair
Machinability	Excellent
Brazing & Soldering	Not recommended
Oxygen Welding	Not recommended

Inert Gas Welding	Not recommended
Resistance Welding Spot & Beam	Excellent

Typical Applications

High strength structural components: aircraft (e.g. fittings and wheels), military vehicles and bridges, forgings for trucks and machinery (hydraulic etc.). Weapons manufacture, structural applications.

This technical information is given by Holme Dodsworth Metals without charge and the user shall employ such information at their own discretion and risk. For more detailed technical advice on temper selection, fabrication, joining, machining, physical and mechanical data please contact us as space does not permit the listing of every feature of the material.