

## SPECIFICATIONS

Commercial	5754
EN	5754

Aluminium 5754 has excellent corrosion resistance especially to seawater and industrially polluted atmospheres.

It has higher strength than 5251. This high strength makes 5754 highly suited to flooring applications.

Applications

- 5754 is typically used in:
- $\sim$  Treadplate
- ~ Shipbuilding
- $\sim$  Vehicle bodies
- ~ Rivets
- ~ Fishing industry equipment
- ~ Food processing
- ~ Welded chemical and nuclear structures

Please note that Mechanical Properties shown are for H114 temper.

## CHEMICAL COMPOSITION

BS EN 573-3:2009 Alloy 5754	
Element	% Present
Magnesium (Mg)	2.6 - 3.6
Manganese + Chromium (Mn+Cr)	0.1 - 0.6
Manganese (Mn)	0.5 max
Iron (Fe)	0.4 max
Silicon (Si)	0.4 max
Chromium (Cr)	0.3 max
Zinc (Zn)	0.2 max
Others (Total)	0.15 max
Titanium (Ti)	0.15 max
Copper (Cu)	0.1 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

# ALLOY DESIGNATIONS

Alloy 5754 corresponds to the following standard designations and specifications *but may not be a direct equivalent*: A95754

Al Mg3 Al 3.1Mg Mn Cr AW-5754

### **TEMPER TYPES**

The most common tempers for 5754 aluminium are shown below with H114 & (H111) being the most common treadplate temper

- 0 Soft
- H111 Some work hardening imparted by shaping processes but less than required for H11 temper
- H22 Work hardened by rolling then annealed to quarter hard
- H24 Work hardened by rolling then annealed to half hard
- H26 Work hardened by rolling then annealed to three-quarter hard
- H114

### SUPPLIED FORMS

- Alloy 5754 is typically supplied as treaplate
- Plate
- Sheet

## GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.66 g/cm <sup>3</sup>
Melting Point	600 °C
Thermal Expansion	24 x10 <sup>-6</sup> /K
Modulus of Elasticity	68 GPa
Thermal Conductivity	147 W/m.K
Electrical Resistivity	0.049 x10 <sup>-6</sup> Ω .m



## MECHANICAL PROPERTIES

BS EN 485-2: 2008 Aluminium Sheet 0.2mm to 6.00mm	
Property	Value
Proof Stress	80 Min MPa
Tensile Strength	190 - 260 MPa
Elongation A50 mm	12 Min %
Hardness Brinell	52 HB

Properties above are for material in the H114 condition

### WELDABILITY

Weldability – Gas: Excellent Weldability – Arc: Excellent Weldability – Resistance: Excellent Brazability: Poor

#### FABRICATION

Workability – Cold: Very good Machinability: Average

#### CONTACT

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#### **REVISION HISTORY**

Datasheet Updated 18 July 2019

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