

# Aluminium Alloy 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:

- ◆ Treadplate
- ◆ Shipbuilding
- ◆ Vehicle bodies
- ◆ Rivets
- ◆ Fishing industry equipment
- ◆ Food processing
- ◆ Welded chemical and nuclear structures

## Chemical Composition

Element	% Present
Si	0.4%
Fe	0.4%
Mn	0.5%
Mg	2.6-3.2%
Al	Balance

## Alloy Designations

Aluminium alloy 5754 also corresponds to the following standard designations and specifications:

A95754                      Al Mg3  
Al 3.1Mg Mn Cr              AW-5754

## Temper

Alloy 5754 is most commonly supplied in plate form with a H111 temper. H111 refers to some work hardening being imparted by shaping processes but less than that required for a H11 temper.

## Welding

Alloy 5754 has excellent weldability. The recommended filler alloy is 5356.

## Mechanical Properties

Temper	H22	H24	H26	O/H111
Proof Stress 0.2% (MPa)	185	215	245	100
Tensile Strength (MPa)	245	270	290	215
Shear Strength (MPa)	150	160	170	140
Elongation A5 (%)	15	14	10	25
Hardness Vickers (HV)	75	80	85	55

## Physical Properties

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

## Fabrication

Process	Rating
Workability – Cold	Very good
Machinability	Average
Weldability – Gas	Excellent
Weldability – Arc	Excellent
Weldability – Resistance	Excellent
Brazability	Poor
Solderability	

## Supplied Forms

5754 is typically supplied as either 5-bar treadplate or rice grain treadplate. ■

All Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product form and product dimensions. For more complete details please refer to the relevant specification – The BS EN Specifications for aluminium are listed on a separate Datasheet.



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