



Aluminium Alloy - 5754 - H111 Treadplate

SPECIFICATIONS

Commercial	5754
EN	5754

Aluminium alloy 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

Please note that Mechanical Properties shown are for H111 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 also 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

- O - 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 treadplate

- Plate
- Sheet
- Treadplate/Patterned Sheet

GENERIC PHYSICAL PROPERTIES

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



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MECHANICAL PROPERTIES

BS EN 485-2:2008
Sheet
0.2mm to 6.00mm

Property	Value
Proof Stress	60 Min MPa
Tensile Strength	160 - 200 MPa
Elongation A50 mm	12 Min %
Hardness Brinell	44 HB

Properties above are for material in the H111 condition.
Some thicknesses have a slightly higher minimum elongation requirement.

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 13 November 2018

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