

# Aluminium Alloy

## 5052 H32 Triple-Grip Treadplate



### SPECIFICATIONS

Commercial	5052 H32
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Aluminium alloy 5052 in H32 temper has very good corrosion resistance to seawater and marine and industrial atmosphere. It also has very good weldability and good cold formability. It is a medium to high strength alloy with a strength slightly higher than 5251 and a medium to high fatigue strength.

This treadplate is supplied to BS EN 1386.

Alloy 5052-H32 TripleGrip treadplate has a range of useful properties:

- ~ Decorative Finish
- ~ Hard Wearing
- ~ Non-Slip
- ~ Corrosion Resistant
- ~ Low Maintenance
- ~ Anti-Static
- ~ Light-weight

### CHEMICAL COMPOSITION

BS EN 573-3:2009  
Alloy 5052

Element	% Present
Magnesium (Mg)	2.20 - 2.80
Chromium (Cr)	0.15 - 0.35
Iron (Fe)	0.0 - 0.40
Silicon (Si)	0.0 - 0.25
Others (Total)	0.0 - 0.15
Manganese (Mn)	0.0 - 0.10
Zinc (Zn)	0.0 - 0.10
Copper (Cu)	0.0 - 0.10
Other (Each)	0.0 - 0.05
Aluminium (Al)	Balance

### ALLOY DESIGNATIONS

Alloy 5052 also corresponds to the following standard designations and specifications **but may not be a direct equivalent:**

Al 2.5Mg Cr  
Al Mg2,5

### TEMPER TYPES

- H32 - Work hardened by rolling then stabilised by low-temperature heat treatment to quarter hard

### SUPPLIED FORMS

- Treadplate/Patterened Sheet

### GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.68 g/cm <sup>3</sup>
Melting Point	605 °C
Thermal Expansion	23.7 x10 <sup>-6</sup> /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	138 W/m.K
Electrical Resistivity	0.0495 x10 <sup>-6</sup> Ω .m

### MECHANICAL PROPERTIES

BS EN 573-3:2009  
Sheet  
1.5mm to 3mm

Property	Value
Proof Stress	130 Min MPa
Tensile Strength	210 - 260 MPa
Hardness Brinell	61 HB

### APPLICATIONS

Alloy 5052-H32 Aalco TripleGrip Treadplate is typically used in a wide range of structural and decorative applications, including:

- ~ Factory Flooring
- ~ Flooring and vertical panels in the road transport industry – commercial vehicles, buses, coaches, fire engines, military & utility vehicles, etc.
- ~ Railway rolling stock
- ~ Stations and freight terminals for railways, underground railways, ports, cargo handling, etc.
- ~ Materials handling equipment such as conveyors, airport baggage carousels,
- ~ Indoor and outdoor walkways, steps, stairways, gantries, bridges, cranes,
- ~ Decorative indoor and outdoor panels for architectural / building & construction use
- ~ Horse boxes, trailers, boat trailers, etc.

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### SIZE RANGE

Size (mm)	Weight per plate (kg)
2500 x 1250 x 1.5	13.9
2500 x 1250 x 2.0	18.1
2500 x 1250 x 3.0	26.6

### FABRICATION

Workability - Cold: Good  
Machinability: Acceptable  
Weldability - Gas: Good  
Weldability - Arc: Very Good  
Weldability - Resistance: Very Good  
Brazability: Acceptable  
Soldeability: Not Recommended

### COMPARED WITH 5-BAR TREADPLATE IN ALLOY 5754-H111

Alloy 5754 has slightly higher corrosion resistance and better weldability than alloy 5052. The two alloys have similar physical and mechanical properties and fabrication performance.

Tensile Strength and Shear Strength are very similar whilst Proof Strength of 5754 is only 100 as against 175 for TripleGrip.

### CONTACT

**Address:** Please make contact directly with your local service centre, which can be found via the Locations page of our web site.  
**Web:** [www.amari-ireland.com](http://www.amari-ireland.com)

### REVISION HISTORY

Datasheet Updated 13 November 2018

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