

## Aluminium

## Aluminium 5083 H321 Sheet & Plate

Datasheet Updated  
18 July 2022

### RANGE

Plate can be cut to customer requirements. Please contact your local Service Centre for further details. 4000 x 2000 & 6000 x 2000 plates are 3.2 certified to

- LRS
- DNV
- BV
- ABS

Sheet Size	Thicknesses
4000 x 2000	3.0mm - 25.0mm
6000 x 2000	3.0mm - 40.0mm

### SPECIFICATIONS

Commercial	5083 H321
EN	5083 H321

The highest strength non heat treatable marine grade aluminium alloy, for excellent seawater corrosion resistance.

### CHEMICAL COMPOSITION

**BS EN 573-3**  
**Alloy 5083**

Element	% Present
Manganese (Mn)	0.40 - 1.00
Iron (Fe)	0.00 - 0.40
Copper (Cu)	0.00 - 0.10
Magnesium (Mg)	4.00 - 4.90
Silicon (Si)	0.00 - 0.40
Zinc (Zn)	0.00 - 0.25
Chromium (Cr)	0.05 - 0.25
Titanium (Ti)	0.00 - 0.15
Aluminium (Al)	Balance

### ALLOY DESIGNATIONS

Alloy 5083 corresponds to the following standard designations and specifications *but may not be a direct equivalent*:

- GM41
- A95083
- AIMG4.5Mn
- Al Mg4.5 Mn0.7

### TEMPER TYPES

The most common tempers for 5083 aluminium are:

- H321

### SUPPLIED FORMS

- Sheet
- Plate

### APPLICATIONS

- Shipbuilding
- Rail cars
- Vehicle bodies
- Tip truck bodies
- Mine skips and cages
- Pressure vessels

### CHARACTERISTICS

- Exceptional strength after welding
- Exceptional performance in extreme environments
- Not recommended for use in temperatures above 650C
- Marine grade aluminium alloy

## MECHANICAL PROPERTIES

**BS EN 485-2**

**Sheet 0.2mm to 6.00mm**

Property	Value
Proof Stress	240 Min MPa
Tensile Strength	330 MPa
Elongation A50 mm	17 %
Shear Strength	185 MPa
Hardness Vickers	95 HV

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