

Aluminium

5083 O H111 Sheet & Plate

Datasheet Updated
25 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	Sheet Thicknesses	Plate Thickness
2000 x 1000	2.0mm - 3.0mm	
2500 x 1250	1.5mm - 8.0mm	4.0mm - 25.0mm
3000 x 1500	2.0mm - 6.0mm	
3020 x 1520	12.0mm - 15.0mm	
2500 x 1250	1.5mm - 8.0mm	
4000 x 2000		3.0mm - 25.0mm
6000 x 2000		3.0mm - 40.0mm

SPECIFICATIONS

Commercial	5083 O H111
EN	5083 O H111

The highest strength non heat treatable aluminium alloy.

CHEMICAL COMPOSITION

BS EN 573-3 Alloy 5083

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

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:

- O
- H111
- H32

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 65°C
- Marine grade aluminium alloy

MECHANICAL PROPERTIES

BS EN 485-2

Sheet 0.2 - 6.3mm Thick

Property	Value
Proof Stress	125 Min MPa
Tensile Strength	275 - 350 MPa
Hardness Brinell	75 HB

BS EN 485-2

Plate 6.3mm to 80mm

Property	Value
Proof Stress	115 Min MPa
Tensile Strength	270 - 345 MPa
Hardness Brinell	75 HB

BS EN 485-2

Plate 80mm to 120mm

Property	Value
Proof Stress	110 Min MPa
Tensile Strength	260 Min MPa
Hardness Brinell	70 HB
Elongation A	12 Min %

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon. Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

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