

Aluminium

Aluminium 6082 T6 T651 Sheet & Plate

Datasheet Updated
18 July 2022

RANGE

Sheet

Sheet Size	Thicknesses
2000 x 1000	0.6mm - 3.0mm
2500 x 1250	0.5mm - 3.0mm
3000 x 1250	1.0mm - 3.0mm

Plate

Sheet Sizes	Thicknesses
2000 x 1000	4.0mm - 6.0mm
2500 x 1250	3.0mm - 305.0mm
3000 x 1500	3.0mm - 305.0mm
4000 x 2000	3.0mm - 305.0mm

Plate can be cut to customer requirements. Please ask your local Service Centre for further details.

SPECIFICATIONS

Commercial	6082 T6 T651
EN	6082 T6 T651

Structural aluminium alloy with the highest strength in the 6000 series.

CHEMICAL COMPOSITION

BS EN 573-3 Alloy 6082

Element	% Present
Manganese (Mn)	0.40 - 1.00
Iron (Fe)	0.00 - 0.50
Magnesium (Mg)	0.60 - 1.20
Silicon (Si)	0.70 - 1.30
Copper (Cu)	0.00 - 0.10
Zinc (Zn)	0.00 - 0.20
Titanium (Ti)	0.00 - 0.10
Chromium (Cr)	0.00 - 0.25
Other (Each)	0.00 - 0.05
Others (Total)	0.00 - 0.15
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy 6082 also corresponds to the following standard designations and specifications **but may not be a direct equivalent:**

- AA6082
- HE30
- DIN 3.2315
- EN AW-6082
- ISO: Al Si1MgMn
- A96082

TEMPER TYPES

The most common tempers for 6082 aluminium are:

- T4
- T651
- O
- T6

SUPPLIED FORMS

- Sheet
- Plate

APPLICATIONS

- Highly stressed applications
- Trusses
- Bridges
- Cranes
- Transport applications
- Ore skips
- Beer barrels
- Milk churns

CHARACTERISTICS

- Excellent corrosion resistance
- Medium strength
- Good machinability. In the T6 and T651 temper, alloy 6082 machines well and produces tight coils of swarf when chip breakers are used.
- Good weldability

MECHANICAL PROPERTIES

BS EN 485-2

Sheet 0.4mm to 6.00mm

Property	Value
Proof Stress	260 Min MPa
Tensile Strength	310 Min MPa
Hardness Brinell	94 HB

BS EN 485-2

Plate 6.00m to 12.5mm

Property	Value
Proof Stress	255 Min MPa
Tensile Strength	300 Min MPa
Elongation A50 mm	9 Min %
Hardness Brinell	91 HB

BS EN 485-2

Plate 12.5mm to 100.00mm

Property	Value
Proof Stress	240 Min MPa
Tensile Strength	295 Min MPa
Hardness Brinell	89 HB

BS EN 485-2

Plate 100.00mm to 150.00mm

Property	Value
Proof Stress	240 Min MPa
Tensile Strength	275 Min MPa
Hardness Brinell	84 HB
Elongation A	6 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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