

# 6061 Aluminium

COMMERCIAL ALUMINIUM ALLOY

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# Key Features

- Excellent weldability and formability
- Medium to high-strength alloy
- Medium fatigue strength
- Superior corrosion resistance

#### **Product Overview**

**6061 aluminium** represents one of the most versatile heat-treatable alloys and is of American origin, which finds typical use in heavy-duty structures.

With medium to high strength, the material offers superior corrosion resistance combined with medium fatigue strength. 6061 offers excellent formability and weldability and is readily disposed to furnace brazing. We offer 6061 in sheet, plate and extrusion form and include T651 plates.

#### **Availability:**

Sheet, plate and extrusions

#### **Applications**

- Heavy duty structures
- Shipbuilding, motorboats
- Aircraft structures
- Pylons and towers
- Rail coaches and truck bodies

#### \* Chemical Composition (weight, %)

|      | Mn   | Fe   | Mg   | Si   | Cu   | Zn   | Ti   | Cr   | Al  |
|------|------|------|------|------|------|------|------|------|-----|
| Min. |      |      | 0.80 | 0.40 | 0.15 |      |      | 0.04 | Bal |
| Max. | 0.15 | 0.70 | 1.20 | 0.80 | 0.40 | 0.25 | 0.15 | 0.35 | Bal |

<sup>\*</sup> Properties as per BS EN 573-3

#### \* Mechanical Properties

| Tensile Strength           | 290 MPa min. |
|----------------------------|--------------|
| Proof Stress               | 240 MPa min. |
| Elongation A50 mm          | 8% min.      |
| Brinell Hardness (typical) | 88 HBW       |
|                            |              |

<sup>\*</sup> roperties as per BS EN 485-2, T651 (12.5-40mm thickness range)

### **Physical Properties**

| Density               | 2.70 g/cm³                |  |
|-----------------------|---------------------------|--|
| Melting Point         | 650 °C                    |  |
| Thermal Expansion     | 23.4 x10 <sup>-6</sup> /K |  |
| Modulus of Elasticity | 70 GPa                    |  |
| Thermal Conductivity  | 166 W/m.K                 |  |
|                       |                           |  |

Toperties as per b3 EN 463-2, 1031 (12.3-4011111 tillekiless 1



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