

## Features

- **High Strength:** One of the strongest aluminium alloys available, specifically valued for structural integrity under heavy loads. Typical ultimate tensile strength for T3/T351 tempers is around 470–483 MPa.
- **Superior Fatigue Resistance:** Unlike many other high-strength alloys, 2024 is specifically chosen for applications subjected to **cyclic loading** and constant tension, such as aircraft wing structures.
- **Good Machinability:** Despite its high strength, it can be machined to a very high finish. It is frequently used for precision fittings and machined components. Limited
- **Weldability:** Fusion welding (arc or gas) is generally not recommended due to solidification defects. Resistance welding methods, such as spot or seam welding, are feasible alternatives

## RS PRO 2024 Aluminium Sheet, L:300MM X W:500MM X T:1IN

RS Stock No: 0783470



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

RS PRO 2024 Aluminium Sheet

*The RS PRO 2024 Aluminium Sheet is a high-strength, aerospace-grade material widely recognized for its superior strength-to-weight ratio and exceptional fatigue resistance. The defining characteristics of this alloy revolve around its high mechanical strength, which makes it suitable for aerospace applications, balanced by some limitations in other areas.*

Key Features:

- While formable in the annealed condition (O temper), in the high-strength T3/T351 tempers, it has limited cold formability, requiring larger bend radii.*
- RS PRO 2024 Aluminium Sheet can be cut and extruded, producing a high finish.*
- The primary limitation is its poor resistance to atmospheric and galvanic corrosion due to the high copper content.*
- Offers excellent toughness even at moderately high strength levels, making it stable under high-stress conditions.*

Applications:

- Aircraft Structures: Wing tension members, fuselage structures, and bulkheads.*
- Military Equipment: Structural components for various defence applications.*
- Automotive/Transport: Lorry wheels, gears, pistons, and cylinders.*
- Industrial Engineering: High-strength shafts and precision machined components.*

General Specifications

|           |                |
|-----------|----------------|
| Material  | Aluminium 2024 |
| Form      | Sheet          |
| Length    | 300MM          |
| Width     | 500MM          |
| Thickness | 1INCH          |

Mechanical Specifications

|                          |                    |
|--------------------------|--------------------|
| Density                  | 2.77 g             |
| Modulus of Elasticity    | 73.1 GPa           |
| Sheer Strength & Modulus | 283 MPa            |
| Brinell Hardness (HB)    | 120                |
| Tensile Strength         | 393 MPa to 483 MPa |
| Thermal Conductivity     | 121 W/m·K          |

Approvals

|                           |                                                                                |
|---------------------------|--------------------------------------------------------------------------------|
| Compliance/Certifications | Manufactured to meet standards such as ASTM B209, AMS-QQ-A-250/4, and AMS4037. |
|---------------------------|--------------------------------------------------------------------------------|

Similar Products

| RS Code | Grade | Thickness |
|---------|-------|-----------|
| 0783471 | 2024  | 2.5IN     |
| 0783472 | 2024  | 3/4IN     |
| 0783473 | 2024  | 30MM      |
| 0783475 | 2024  | 2IN       |
| 0783475 | 2024  | 2.3/4IN   |
| 0783476 | 2024  | 1.1/4IN   |
| 0783477 | 2024  | 1.1/2IN   |