

TECHNICAL DATA

Aluminum 7075

Offering higher strength compared to other aluminum alloys, Aluminum 7075 screws are most commonly used by aerospace for their combination of high strength and low weight. These fasteners offer the strength of many grades of steel at a fraction of the density (2.81 g/cc | 0.102 lb/in³). Aluminum 7075 bolts can be tempered to several different conditions (including 7075-T6), each offering various levels of strength.

Properties

| | | |
|---------------------------|---------------|----------|
| Ultimate Tensile Strength | 33 ksi | 7075-O |
| | 73.2 ksi | 7075-T73 |
| | 83 ksi | 7075-T6 |
| Yield Strength at 0.2% | 15 ksi | 7075-O |
| | 63.1 ksi | 7075-T73 |
| | 73 ksi | 7075-T6 |
| Elongation % | 16 | 7075-O |
| | 13 | 7075-T73 |
| | 11 | 7075-T6 |
| Usable Temperature Limit | 752°F / 400°C | |

Key Benefits

- High strength with good fatigue strength
- Lightness: Weighs about 1/3 of steel
- Good ductility and toughness
- Economic strength-to-weight ratio
- Low density
- Non-magnetic

Chemistry & Specifications

| Aluminum 7075-T6 | Al | Zn | Mg | Cu | Fe | Si | Mn | Ti | Cr | Other |
|------------------|-----|---------|---------|---------|------|------|------|------|-----------|------------------------|
| Typical % | Bal | 5.1-6.1 | 2.1-2.9 | 1.2-2.0 | 0.50 | 0.40 | 0.30 | 0.20 | 0.18-0.28 | 0.05 each / 0.15 total |

SPECIFICATIONS: UNS A97075, QQ-A-200/11, AMS-QQ-A-200/11, ASTM-B211, AMS 4154

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