7075 Aluminum Alloy Overview

7075 aluminum alloy is a high-strength aluminum alloy from the 7000 series, known for its exceptional strength-to-weight ratio and excellent mechanical properties. It is often used in applications requiring high performance and reliability in demanding environments.

Chemical Composition:

- Aluminum (Al): 90.7% - 91.7%
- Zinc (Zn): 5.1% - 6.1%
- Magnesium (Mg): 2.1% - 2.9%
- Copper (Cu): 1.2% - 2.0%
- Chromium (Cr): 0.18% - 0.28%
- Other Elements: < 0.5% each, < 0.15% total for other elements

Physical Properties:

- Density: 2.81 g/cm³ (0.1015 lb/in³)
- Melting Point: 475 - 640°C (887 - 1184°F)

Mechanical Properties:

- Tensile Strength: 570 - 600 MPa (82700 - 87000 psi)
- Yield Strength: 500 - 560 MPa (72500 - 81200 psi)
- Elongation: 7% - 10%
- Modulus of Elasticity: 71.7 GPa (10400 ksi)

Applications:

1. Aerospace Components: Used for aircraft structural parts due to its high strength and fatigue resistance.
2. Defense Equipment: Employed in military vehicles and equipment for its durability and reliability.
3. Sporting Goods: Used in the production of bicycle frames and other sports equipment due to its lightweight and strength.
4. Automotive Industry: Applied in high-performance automobile parts requiring strength and rigidity.
5. Industrial Machinery: Utilized in manufacturing machinery and equipment that demand robustness and precision.

7075 aluminum alloy stands out as a high-strength alloy known for its remarkable strength-to-weight ratio and exceptional mechanical properties. This alloy's applications span critical sectors such as aerospace, defense, and high-performance industries. With its ability to withstand demanding environments and provide reliability, 7075 is a top choice for components requiring both strength and lightness.

Email: sales@wdalu.com
Phone/Whatsapp/WeChat: +86 17719845538
Office Add: E6 Building, Zhima Street Park, Zhongyuan District, Zhengzhou City, Henan Province, China.