5083 Aluminum Alloy: Overview and Properties

5083 aluminum alloy is a well-known and widely used aluminum alloy with exceptional properties that make it suitable for various industrial applications. It is a part of the 5xxx series of aluminum alloys, which are known for their excellent corrosion resistance, good weldability, and moderate strength.

Chemical Composition:

- Aluminum (Al): 91.4 - 95.2%
- Magnesium (Mg): 4.0 - 4.9%
- Manganese (Mn): 0.40 - 1.0%
- Chromium (Cr): 0.05 - 0.25%
- Iron (Fe): 0.0 - 0.40%
- Silicon (Si): 0.0 - 0.25%
- Zinc (Zn): 0.0 - 0.25%
- Titanium (Ti): 0.0 - 0.15%
- Copper (Cu): 0.0 - 0.10%
- Others (each): 0.0 - 0.05%
- Others (total): 0.0 - 0.15%

Physical Properties:

- Density: 2.65 g/cm³ (0.096 lb/in³)
- Melting Point: 570°C (1058°F)
- Thermal Conductivity: 121 W/m·K (25°C)
- Electrical Conductivity: 27% IACS

Mechanical Properties:

- Tensile Strength: 275 MPa (40 ksi) - 345 MPa (50 ksi)
- Yield Strength: 110 MPa (16 ksi) - 240 MPa (35 ksi)
- Elongation: 12% - 16%
- Brinell Hardness: 75 HB

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