

DESCRIPTION

Aluminium Alloy **AA-5083** is known for exceptional performance in extreme environments. **AA-5083** is highly resistant to attack by both seawater and industrial chemical environments. **AA-5083** also retains exceptional strengths after welding. It has the highest strength in the non-heat treatable alloys but is not recommended for use in temperatures in excess of 65°C

APPLICATIONS

AA-5083 is typically used in:

- Ship Building
- Vehicle Bodies
- Pressure Vessels
- Marine Applications
- Transportation Equipment
- Drilling Rigs

Please note that Mechanical Properties shown are for **H116*** temper.

***H116-** Specially fabricated, controlled strain, corrosion resistant temper for Al-Mg alloys (mechanical property limits and intergranular and exfoliation corrosion resistance specified)

CHEMICAL COMPOSITION

Element	Composition %
Magnesium (Mg)	4.00 – 4.90
Manganese (Mn)	0.40 – 1.00
Iron (Fe)	0.40 Typical
Silicon (Si)	0.00 - 0.40
Titanium (Ti)	0.05 - 0.25
Chromium (Cr)	0.05 - 0.25
Copper (Zn)	0.10 Typical
Zinc (Zn)	0.00 - 0.10
Others (Total)	0.00 - 0.15
Others (Each)	0.00-0.05
Aluminium (Al)	Balance

SUPPLIED FORMS

At **Dinco Trading LLC** we stock/offer Aluminium Alloy **AA5083-H116** in the form of - Sheet & plates. These are with **DNV Class certifications**

MECHANICAL PROPERTIES

Property	Value
Proof Stress	195 Min MPa
Tensile Strength	305 - 385 MPa
Elongation at 50 mm	8 % Min
Hardness Brinell	81 HB

WELDABILITY

Weldability-Gas: Average
 Weldability-Arc: Excellent
 Brazeability: Poor
 Weldability-Resistance: Excellent

FABRICATION

Machinability: Poor
 Workability-Cold: Average

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.65 g/cm ³
Melting Point	570 °C
Thermal Expansion	25 x10 ⁻⁶ /K
Modulus of Elasticity	72 GPa
Thermal Conductivity	121 W/m.K
Electrical Resistivity	0.058 x10 ⁻⁶ Ω .m

SIZES RANGE FOR AA5083-H116

We stock Aluminium Alloy **AA-5083** at our warehouses in Dubai and Sharjah.

Please contact us on sales@dinco.ae with your inquiries or call **04-3312182**, or visit: **www.dinco.ae**