Aluminum 5083-H111 | 3.3547 | 54300| AlMg4.5Mn0.7

Aluminum 5083-H111 offers high strength and excellent marine corrosion resistance.

Mechanical properties

Ultimate tensile strength	210-270 MPa
Yield strength	125-150 MPa
Young's modulus (modulus of elasticity)	68 - 72 GPa
Elongation at break	10-15 %

Physical properties

Corrosion resistance	Excellent
Magnetism	Non-magnetic
Weldability	High

Thermal properties

Maximum service temperature	80 - 100 °C
Thermal expansion coefficent	24 - 25 10^-6/ºC
Thermal conductivity	118 - 128 W/(m·°C)

Electrical properties

Electrical resistivity	5,85 - 6,05 µΩ*cm
ESD Safety	No

Post treatments

Post-Processing	Annealing & Cold working
Anodizing compatibility	Suitable

Common applications

Marine industry	
Railroad cars	
Vehicle bodies	
Pressure vessels	

Aluminum 5083-H111 CNC Machining Applications & Parts

Aluminum 5083-H111 is renowned for its exceptional resistance to seawater and industrial chemicals. With high tensile strength in the welded condition, it is the premier choice for marine and offshore applications.

Typical Parts We Machine from 5083-H111:

- **Marine & Offshore:** Boat hulls and superstructures, dock fittings, ship decks, offshore walkways, buoys
- **Pressure Vessels:** Cryogenic tanks, chemical storage containers, LNG carriers
- **Transportation:** Automotive body panels, railroad cars, aircraft fuel tanks, military vehicle armor

Our Machining Advantage:

We understand the work-hardening nature of 5083 and use sharp, positive-rake tooling to produce clean cuts and avoid material tearing, ensuring parts perform reliably in the most corrosive environments.

Get an Instant Quote for your custom Aluminum 5083-H111 parts today.