Marine Grade Aluminum 5059

Marine grade aluminum 5059 is a 5000-series aluminum alloy: the main alloying addition is magnesium, the magnesium content of the 5059 aluminum alloy is the highest in 5000 series aluminum alloy. The 5059 marine grade aluminum products have passed CCS/DNV/ABS/LR/BV classification society, etc. Multiple related certifications, product quality is guaranteed.

Marine aluminium 5059 alloy plates in compliance with ASTM B209, EN 573 and EN 485 standards. In European standards, it will be given as EN AW-5059. A95059 is the UNS number. Additionally, the EN chemical designation is AlMg5,5MnZnZr.

Specifications of 5059 Marine Grade Aluminum Plate:

Alloy	Temper	Thickness (mm)	Width (mm)
5059	O/H111/H112/H116/H321	3-10	⩽2600
5059	H112	10-50	⩽3600

Chemical Composition of Marine Grade Aluminum Plate 5059:

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Zr	Standard
5059	⩽ 0.45	≤0.5	≤0.25	0.6-1.2	5.0-6.0	≤0.25	0.4-0.9	≤0.2	0.05-0.25	EN573 ASTM B928

Mechanical Properties of Marine Grade 5059 aluminium:

Alloy	Temper	Tensile strength Rm(Mpa)	Yield strength Rp0.2 (Mpa)	Elongation A (%)	Exfoliation corrosion mg/cm2	Intergranular corrosion	Standard
5059	O/H111	≥330	≥160	≥24	---	---	EN/ ASTM
5059	H112	≥330	≥160	≥20	---	---	
5059	H116/H321	≥370	≥270	≥10	≤PB	≤15	

Applications of 5059 aluminum plates in marine building:

Marine grade aluminum 5059 is eminently suitable for building seafaring vessels and structures, as well as the machinery and components used within them.

Features of Marine Grade Aluminum 5059:

Al-Mg alloy is the most widely used type of deformed aluminum alloy. It is characterized by a density lower than that of aluminum. It has excellent resistance to marine weather and seawater corrosion, weldability and polishability, and excellent plasticity (Mg $\leqslant$ 5%).), also has good seismic performance, fatigue strength is greater than hard aluminum.