Aluminum 5052 | EN AW-5052 | 3.3523 | AlMg2,5

Aluminum 5052 offers excellent corrosion resistance and good formability.

Mechanical properties

Ultimate tensile strength	170-210 MPa
Yield strength	70-120 MPa
Young's modulus (modulus of elasticity)	68 - 71 GPa
Elongation at break	7-20 %

Physical properties

Corrosion resistance	Good
Magnetism	Non-magnetic

Thermal properties

Maximum service temperature	190 °C
Thermal expansion coefficent	23.8 - 25.7 10^-6/ºC
Thermal conductivity	190 - 220 W/(m·°C)

Electrical properties

Electrical resistivity	4.99 µΩ*cm

Post treatments

Post-Processing	Hot & Cold working, Hardening only by cold working
Anodizing compatibility	Suitable

Common applications

Hydraulic tubes	
Kitchen appliances	

Cabinets	
Small boats	
Aircraft tubes	
Fencing	
Home freezers	

Aluminum 5052 CNC Machining Applications & Parts

Aluminum 5052 is the highest strength alloy of the non-heat-treatable grades, with outstanding fatigue strength and excellent corrosion resistance, especially to salt water. It is highly formable and weldable.

Typical Parts We Machine from 5052:

- **Marine Hardware:** Marine fixtures, fuel tanks, hull plates, boat gangways
- **Electronic Enclosures:** Chassis, cases, and shields for electronics
- **General Fabrication:** Sheet metal parts, panels, tanks, and pressure vessels

Our Machining Advantage:

We carefully control machining parameters to prevent burrs and ensure clean edges on this ductile alloy, resulting in parts ready for forming or welding with high structural integrity.

Get an Instant Quote for your custom Aluminum 5052 parts today.