

Product	Description	Properties
<u>Aluminum</u>		
1100	Commercially pure aluminum. It contains a controlled amount of copper, but it is 99% aluminum. It is commonly used in the production of wrought products. Its ability to take form is excellent. It is low cost and highly resistant to chemical attack	High electrical conductivity, high resistance to corrosion, low density, good formability
2011	The most free-machining aluminum grade, widely used for automatic screw machine products requiring extensive machinework	High mechanical strength, easy machinability, good corrosion resistance
2014	An aluminum alloy, in which the main alloying component is copper. It is commonly used where good strength-to-weight characteristics are needed. Also, it is one of the strongest aluminum alloys. This grade of aluminum alloy is often used by the aerospace industry	Good fatigue resistance, relatively low corrosion resistance, high strength-to-weight ratio, average machinability
2024	Also known as the "aircraft alloy", Aluminum 2024 is an aluminum alloy popular for its use in aircraft parts. It used in applications that require a high degree of strength-to-weight.	Moderate strength, high machinability, high welding ability, good stress corrosion cracking resistance, high strength-to-weight ratio
2219	An aluminum alloy, with copper as the main alloying component. It has lower corrosion resistance relative to other aluminum alloys. If heat treated, it can achieve higher strength at the expense of ductility	Great strength, low conductivity, low ductility, low thermal conductivity, high fracture toughness

2618	Aluminum 2618 is an age-hardenable alloy containing copper and magnesium as the main alloying components. They are useful in situations where heat exposure of up to 575°F are encountered	Excellent machinability, good formability, high heat resistance, high ductility
3003	Aluminum 3003 is a general-purpose alloy of the 3000 series, that contains manganese as a main alloying element. This allows grains to form that absorb impurities and corrosion	Moderate strength, good workability, good corrosion resistance,
5052	Aluminum 5052 is an aluminum alloy with magnesium and chromium as the primary alloying elements. It is stronger than 3003, but readily formable. The addition of magnesium allows the alloy to be more resistant to corrosion, including salt water corrosion, which makes it suitable for underwater and maritime applications	High strength, great corrosion resistance, non-heat treatable, good finishing characteristics
5083	Aluminum 5083 is an aluminum alloy with magnesium, manganese, and chromium as its primary alloying elements. The addition of these elements allows the 5083 to be exceptionally resistant to seawater corrosion and industrial chemicals. The 5083 is a stronger alloy than the 5052 grade.	Great thermal conductivity, suitable for welding, good formability, great ductility, exceptional resistance to corrosion
5086	Aluminum 5086 is an aluminum alloy with magnesium as its main alloying component. It offers higher strength than the 5052 or 5083 alloys. It can remain a cost-effective choice after being strengthened by strain hardening and cold working	Great corrosion resistance, great weldability

5454	Aluminum 5454 is an aluminum alloy with magnesium as its main alloying component. It is similar to the 5154 alloy. Its strength and weldability allow the 5454 to be used when general environmental conditions are expected.	Moderate to high strength, excellent weldability high fatigue strength, great corrosion resistance
6061	Aluminum 6061 is a precipitation hardening alloy with magnesium and silicon as its main alloying components. It is one of the most common general-purpose alloys. The 6061 is also one of the most versatile aluminum alloys	Medium strength, medium corrosion resistance in harsh environments, good weldability, good finished properties, good toughness
6013	Aluminum 6013 is a wrought alloy with magnesium and silicon as its main alloying elements. It offers great properties that make it a good choice for aerospace applications. It is also commonly used for industrial and commercial applications.	High strength, excellent compressive attributes, great formability, great corrosion resistance, great stress cracking resistance
7049	Aluminum 7049 is a forging alloy which represents excellent resistance to stress corrosion cracking. The 7049 alloy is usually used in structural forgings, especially for aircraft and missile production. Its main alloying component is zinc	Good machinability, excellent corrosion resistance, excellent resistance to stress corrosion cracking, good electrical conductivity
7050	Aluminum 7050 exhibits better characteristics than the more established 7075. This alloy contains zinc as its main alloying component. Also, the 7050 maintains its strength properties better than other aluminum alloys	High mechanical properties, high fracture toughness, high resistance to stress corrosion cracking

7475	Aluminum 7475 is a controlled toughness alloy that has qualities better than or equal to that of many high strength aerospace alloys. It has 40% greater toughness than the 7075, better corrosion resistance, and better fatigue behavior	Good machining, forming, heat treating, great strength, high corrosion resistance, good fatigue behavior
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Specs	Markets	Applications
ASTM B209, ASTM B210, ASTM B211, ASTM B221, ASTM B483, ASTM B491, ASTM B547	Aerospace, Industrial, Automotive & Transportation	Tapes, fin stock, heat exchanger fins, tags, and name plates, commercial filters, decorative applications, giftware, and reflectors, and in sheet metal work.
ASTM B209, ASTM B210, ASTM B211, ASTM B220	Aerospace, Industrial, Automotive & Transportation	Appliance parts, automotive trim, fasteners, fittings
ASTM B209, ASTM B210, ASTM B211, ASTM B221	Aerospace, Industrial, Automotive & Transportation	Truck frames, aircraft structures, cylinders and pistons, machine parts
ASTM B211, AMS 4120, AMS 4339, AMS-QQ-A-225/6, ASTM B221, AMS 4152, AMS 4164, AMS 4165, AMS-QQ-A-200/3	Aerospace, Automotive & Transportation, Defense	Aircraft components, wing components, fuselage components, truck wheels, pistons, fasteners.
AMS 4031, AMS 4066, AMS 4068, AMS 4094, AMS 4095, AMS 4096, AMS 4143, AMS 4144, AMS 4162, AMS 4313, ASTM B209, ASTM B211, ASTM B221, ISO 6361, MIL-A-22771, MIL-A-46118	Aerospace, Automotive & Transportation	Space boosters, fuel tanks, structural applications under high temperatures

ASTM B209, ASTM B210, ASTM B211, ASTM B221	Aerospace, Defense, Automotive & Transportation	Pistons, rotating aircraft parts, tubing, auto sport components
ISO 6361, ASTM B209, ASTM B210, ASTM B211, ASTM B221, ASTM B483, ASTM B491, ASTM B547	Aerospace, Defense, Automotive & Transportation, Energy, Industrial	Gas lines, refrigerator panels, storage tanks, garage doors, utensils, trays
AMS 4004, AMS 4017, AMS 4175, AMS 4178, AMS 4348, ASTM B209, ASTM B210, ASTM B211, ASTM B221, ASTM B234, ASTM B241, ASTM B313, ASTM B316, ASTM B404, ASTM B483, ASTM B547, ASTM B548, MIL-C-26094, MIL-G-18014, MIL-S-12875, UNS A95052	Aerospace, Medical Industrial, Automotive & Transportation	Heat exchangers, fuel lines, fuel tanks, flooring panels, streetlights, appliances, wire, hospital and medical equipment
AMS 4057, AMS 4058, ASTM B209, ASTM B210, ASTM B221, ASTM B241, ASTM B247, ASTM B345, ASTM B361, ASTM B547, ASTM B548, DIN 3.3547, MIL-A-45225, MIL-A-46027, MIL-A-46083, MIL-A-46027, SAE, J454, UNS A95083	Aerospace, Defense, Industrial, Automotive & Transportation, Energy	Auto cryogenics, drilling rigs, missile components, storage tanks, armor plate, TV tower structure
ASTM B209, ASTM B210, ASTM B221, ASTM B241, ASTM B313, ASTM B345, ASTM B361, ASTM B547, ASTM B548, MIL C-26094, MIL S-24149	Industrial, Defense, Automotive & Transportation, Energy	Shipyards, tank cars, armor plate, yachts, missile components, marine components

ASTM B209, ASTM B221, ASTM B234, ASTM B241, ASTM B404, ASTM B547, ASTM B548	Industrial, Automotive & Transportation	Pressure vessels, boilers, welded structures
ASM 4027, ASTM B209	Aerospace, Medical, Industrial, Defense, Automotive & Transportation, Energy	Hospital and medical equipment, marine fittings, brake components, valves, electrical fittings, connectors, drive shafts, aircraft components
AMS 4347	Aerospace, Industrial, Medical, Automotive & Transportation, Energy	Valves, munitions, fuselage panels, aircraft parts, machine parts
UNS A97049, ASTM B209	Aerospace, Industrial, Automotive & Transportation	Structural forgings, missile components, aircraft components
AMS 4108, AMS 4201, ASTM B247, ASTM B316	Aerospace, Industrial, Automotive & Transportation	Fuselage frames, bulkheads

AMS 4202, ASTM B594	Aerospace, Industrial, Automotive & Transportation	Wings spars, fuselage bulkheads
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Forms

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Coil, Profile, Extrusion

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