

High Corrosion-Resistant 5754 Aluminum Sheet

1 . High Corrosion-Resistant 5754 Aluminum Sheet Description

For engineers and purchasing managers looking to buy custom aluminum plates, 5754 offers a more cost-effective and workable solution than rigid marine-grade alloys, while offering higher structural strength than general-purpose aluminum.

At GNEE, a leading wholesale 5754 aluminum sheet supplier in China, we manufacture and export high-quality aluminum products. We provide custom sizes, stable mechanical properties, and fast global delivery to support your manufacturing and construction projects.

(1) Key Advantages of 5754 Aluminum Sheet

When selecting materials for industrial manufacturing, the 5754 aluminum sheet provides several distinct functional benefits:

Excellent Corrosion Resistance: The alloy performs exceptionally well in seawater and heavily polluted industrial environments. It does not rust or degrade quickly when exposed to moisture, making it ideal for outdoor and marine applications.

Good Weldability: Welding is a common requirement in industrial fabrication. 5754 aluminum is highly suitable for both MIG (Metal Inert Gas) and TIG (Tungsten Inert Gas) welding methods. It maintains a strong joint without significant strength loss after welding.

Moderate Strength and Lightweight: It offers better tensile and yield strength compared to standard 5052 aluminum. At the same time, it has a much lower density than steel, allowing manufacturers to reduce the overall weight of vehicles and structures without sacrificing durability.

Excellent Formability: The material is easy to bend, roll, and fabricate into complex shapes. This is highly beneficial for making pipes, curved tanks, and vehicle body parts.

Surface Treatment Performance: 5754 aluminum responds very well to various surface treatments. It is suitable for anodizing, protective color coating, and other decorative finishes to extend its lifespan and improve its visual appearance.

Are you planning a new marine or industrial project? Finding the right 5754 aluminum sheet supplier is critical for quality and cost control. GNEE offers factory-direct pricing, custom cutting, and international shipping.

[Contact Our Sales Team Today for a quick and accurate quote.](#)

2 . 5754 Aluminum Sheet Specifications Description

To ensure the material meets your exact engineering requirements, please review the standard specifications, chemical makeup, and mechanical data below.

(1) Size Range

We offer a broad size range to cover everything from thin vehicle panels to thick structural platforms.

Parameter	Standard Range
Thickness	0.4 - 600 mm
Width	20 - 2650 mm
Length	500 - 16000 mm
Available Tempers	F, O, H12 - H38, H111, H112, H114

(2) Chemical Composition of 5754 aluminum sheet

The performance of the 5754 aluminum sheet relies on its strict chemical formulation. The addition of 2.6% to 3.6% magnesium provides its signature corrosion resistance and strength.

Element	Content (%)
Aluminum (Al)	Balance
Magnesium (Mg)	2.6 - 3.6
Silicon (Si)	≤ 0.40
Iron (Fe)	≤ 0.40
Manganese (Mn)	≤ 0.50
Chromium (Cr)	≤ 0.30
Zinc (Zn)	≤ 0.20
Titanium (Ti)	≤ 0.15
Copper (Cu)	≤ 0.10

(3) Mechanical Properties of 5754 aluminum sheet

The hardness and strength of the sheet depend on the temper. The "O" temper is fully annealed (softest, best for forming), while the "H" tempers are strain-hardened to different degrees for higher strength.

Temper	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)
O (Annealed)	190 - 240	≥ 80	≥ 12
H22 (Quarter Hard)	220 - 270	≥ 130	≥ 10
H32 (Quarter Hard)	250 - 300	≥ 160	≥ 8

(4) Physical Properties of 5754 aluminum

For designers calculating weight loads or thermal systems, these physical properties are standard for 5754 aluminum.

Property	Typical Value
Density	2.66 g/cm ³
Melting Range	600 - 650° C
Thermal Conductivity	~130 W/m • K
Electrical Conductivity	~35% IACS

3 . Common Industry Applications of 5754 Aluminum Sheet

The unique combination of structural strength, weldability, and resistance to rust makes 5754 aluminum a highly versatile material. It is frequently used in the following practical applications:

Industrial and Chemical

Storage Tanks: Used to store mild chemicals and industrial fluids due to its non-reactive nature.

Chemical Pipelines: Ideal for transporting factory wastewater and gas.

Fuel Tanks: Widely used to manufacture diesel and fuel tanks for commercial trucks.

Marine and Offshore

Ship Structures: Used for internal bulkheads, decks, and superstructures on commercial ships.

Offshore Platforms: Used for walkways and equipment enclosures exposed to salt spray.

Seawater Piping Systems: Transports seawater for ship cooling systems without fast degradation.

Transportation

Vehicle Bodies: Used for car doors, hoods, and structural panels to reduce weight and save fuel.

Railway Carriages: Forms the exterior and interior panels of train cars.

Tank Trucks: Used for the main body of road tankers transporting bulk liquids.

Construction and Decoration

Curtain Walls: Used for the exterior cladding of large commercial buildings.

Billboards: Durable metal plates for outdoor advertising signs.

Roofing Sheets: Highly popular for large canopy structures.

4 . Standards and Certifications

As a professional 5754 aluminum sheet supplier, GNEE ensures that all our products meet strict international manufacturing standards. This guarantees that the material you receive will perform exactly as calculated in your engineering plans.

Our production complies with:

ASTM B209 (Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate)

EN 485 / EN 573 (European standards for aluminum plate properties and composition)

ISO 6361 (International standard for wrought aluminum)

GB/T 3880 (Chinese national standard)

To guarantee quality, we can provide the following documents with your shipment:

Mill Test Certificate (MTC)

Third-party inspection reports (SGS / BV)

ISO 9001 Quality Management Certification

5 . GNEE Manufacturing Strength

GNEE is a reliable partner for global metal procurement. We focus on providing stable, large-scale supply for industrial buyers.

High Capacity: We maintain a large annual production capacity, ensuring stable supply even for bulk orders.

Full Product Range: We supply a complete range of 1 to 8 series aluminum products.

Advanced Equipment: Our factory uses advanced rolling equipment capable of producing extra-wide plates up to 2650 mm.

Global Export: We have years of experience exporting aluminum products to Southeast Asia and the Middle East.

6 . Packaging and Delivery Details

We understand that aluminum sheets can be damaged by moisture, salt air, or rough handling during ocean transport. GNEE uses strict, export-standard packaging for every order:

Waterproof Protection: The aluminum sheets are wrapped in heavy-duty waterproof plastic film and anti-corrosion kraft paper.

Physical Protection: We apply thick edge protectors to prevent dents, scratches, and bending during loading and unloading.

Wooden Pallets: The wrapped sheets are securely fastened to export-standard seaworthy wooden pallets or enclosed in wooden cases for safe forklift handling.

Delivery Time: Typical production and delivery time is 20 to 35 days, depending on custom dimensions and order volume.

7 . How to Select the Right 5754 Aluminum Sheet

Before placing an order, consider the following factors to ensure you purchase the correct specifications:

Application Environment: Will the metal be exposed to seawater, chemicals, or standard outdoor weather?

Required Strength: Check the tensile and yield strength requirements of your project. Decide whether you need the O temper (soft) or H32 temper (harder).

Forming Complexity: If your factory needs to bend the plate at sharp angles, choose a softer temper to prevent cracking.

Welding Requirements: 5754 is great for welding, but ensure your welding wire matches the alloy series.

Budget: Balance your performance needs against the price. 5754 offers great middle-ground value.

Do you need help selecting the right temper and thickness for your specific application? GNEE has experienced technical sales engineers ready to assist you. Send Us an Email Now to discuss your project requirements and receive our latest wholesale price list.

[Send Us an Email Now](#)

8 . FAQ

Q1: Is 5754 aluminum suitable for marine use?

Yes. 5754 aluminum has excellent resistance to seawater and salt spray corrosion. It is widely approved and used for marine structures, ship decks, and shipboard piping systems.

Q2: What is the main difference between 5754 and 5052 aluminum?

Both are 5000 series alloys with excellent corrosion resistance. The main difference is strength. 5754 contains more magnesium, which gives it higher tensile and yield strength than 5052, making it better for structural applications.

Q3: Can 5754 aluminum be welded easily?

Yes, it has excellent weldability. It is commonly welded using standard MIG and TIG processes, and it retains good structural integrity around the welded joints.

Q4: Is 5754 aluminum heat-treatable?

No, 5754 is a non-heat-treatable alloy. It cannot be hardened by heat. Instead, it gains its strength and hardness through mechanical cold working during the manufacturing process.

9 . Request a Quote Today

GNEE is ready to supply high-quality 5754 aluminum sheets for your business. To help us provide you with a fast and highly accurate quotation, please provide the following details in your inquiry:

Dimensions: Thickness / Width / Length

Temper: (e.g., O, H22, H32, H111)

Quantity: Total weight (Tons) or number of pieces

Application: Briefly tell us what you are manufacturing so we can verify the specifications.

Our export sales team operates globally and will respond to your inquiry within 24 hours with competitive pricing, shipping estimates, and technical recommendations. Partner with GNEE today for reliable metal supply.