

ASTM B209 3003 H26 Corrugated Aluminum Sheet for Roofing

Unlike traditional galvanized steel that rusts over time, our 3003 aluminum roofing panels offer excellent corrosion resistance, making them perfect for industrial factories, warehouses, and coastal buildings. As a direct factory supplier, GNEE provides competitive factory direct prices, custom cut-to-size services, and fast global shipping for your bulk orders.

1 . What Makes 3003 H26 aluminum sheet for Roofing?

The 3003 alloy is a commercial aluminum alloy with manganese added to it. This small addition of manganese (around 1.0% to 1.5%) increases the strength of the aluminum by 20% compared to pure aluminum (like the 1000 series) while keeping its excellent corrosion resistance.

The H26 temper refers to the hardness of the metal. "H" means strain-hardened (cold-rolled), and "26" indicates it is partially annealed to a 3/4 hard condition. If the aluminum is too soft (like the H14 temper), the roof might sag under heavy snow loads. If the aluminum is too hard (like the T6 temper), it will crack when processed through roll-forming machines. The H26 temper provides the exact stiffness required for structural roofing while allowing the metal sheet to be safely pressed into deep corrugated profiles.

2 . Chemical Composition (%) of 3003 aluminum Alloy

Element	Mn	Fe	Si	Cu	Zn	Al
Content Limits	1.0 - 1.5	≤ 0.7	≤ 0.6	≤ 0.2	≤ 0.1	Balance

3 . 3003 H26 aluminum Mechanical Properties

Property	Typical Value
Tensile Strength	≥ 145 MPa
Yield Strength	≥ 115 MPa
Elongation (A50mm)	≥ 4%

4 . Specifications of ASTM B209 3003 H26 Corrugated Aluminum Sheet for Roofing

Specification Item	Value / Details
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Material Standard	ASTM B209, EN 485
Alloy Grade	3003 (Al-Mn alloy)
Temper	H26 (3/4 Hard)
Thickness Range	0.5 mm - 3.0 mm (Popular: 0.5mm, 0.7mm, 1.0mm, 1.2mm)
Effective Width	600 mm - 2500 mm (Depends on the corrugation profile)
Length	Custom cut (e. g., 2000mm, 2440mm, 3000mm, or up to 5800mm for 20ft container)
Surface Options	Mill finish (bare aluminum), PE Coating, PVDF Coating
Corrugated Type	Wave (Sinusoidal), Trapezoidal (Box profile), Ribbed

5 . Surface Treatment and Coating Options

While the natural mill finish (bare silver aluminum) is the most economical and reflects sunlight effectively, many architectural designs require specific colors. GNEE operates advanced continuous color coating lines to provide factory-painted corrugated sheets.

- Mill Finish: The bare aluminum reacts with oxygen to form a thin, invisible layer of aluminum oxide, which stops further corrosion naturally. It requires zero maintenance.
- PE (Polyester) Coating: A highly cost-effective paint for indoor wall cladding or standard outdoor environments. It provides a smooth finish and vibrant colors. The expected lifespan of PE-coated 3003 aluminum is generally 8 to 10 years before natural fading begins.
- PVDF (Fluorocarbon) Coating: The ultimate architectural coating. If your building faces extreme UV radiation, coastal salt spray, or industrial acid rain, you must choose PVDF. It is highly resistant to chalking and fading, offering a proven outdoor lifespan of 15 to 20 years.

6 . Common Applications of ASTM B209 3003 H26 Corrugated Aluminum Roofing

Because of its superior rust-proof nature and light weight, the 3003 H26 corrugated aluminum sheet is used globally in practical, demanding environments. We frequently supply this product for:

- Chemical Factories & Warehouses: Environments where chemical fumes would rust galvanized steel within a year. Aluminum remains unaffected.

- **Agricultural Farm Buildings:** Chicken houses and dairy barns produce high levels of ammonia gas from animal waste. 3003 corrugated aluminum resists this corrosive gas, making it the perfect agricultural roofing material.
- **Coastal Construction:** Buildings located near the ocean face constant salt spray. Aluminum roofing guarantees a long-lasting, rust-free roof.
- **Aviation Hangars & Large Span Structures:** Because the aluminum sheet is very light, it is ideal for massive roofs where reducing the dead weight of the building materials is an engineering priority.

7 . GNEE Processing & Safe Export Packaging

We hold large stocks of 3003 aluminum sheets. When you place a bulk order, we will uncoil, cut to your exact requested length, and roll-form the sheets in our factory. This means the material goes straight from our production line into your shipping container.

(1) Standard Export Sea-Worthy Packaging:

Aluminum must be protected from moisture during ocean freight. Water trapped between sheets in a dark container can cause white oxidation marks. To prevent this, our packing standard is extremely strict:

- The corrugated sheets are stacked neatly on a solid, fumigation-free wooden pallet.
- We place silica gel desiccants inside the stack to absorb any air moisture.
- The entire stack is wrapped tightly in transparent plastic film, and then completely covered in thick, waterproof brown kraft paper.
- Finally, we use heavy-duty steel strips to tie the sheets down to the pallet, adding hardboard edge protectors to ensure the steel strips do not crush the aluminum ribs.

8 . How is the Price Calculated?

SMM Aluminum Price: The global base price of raw aluminum ingots, which fluctuates daily.

Thickness & Coating: Thinner sheets cost slightly more per ton to process. PVDF coating is more expensive than PE coating.

Order Volume: Bulk orders (like full 20ft containers, which hold about 25 to 27 tons) will always receive our lowest factory-direct price and drastically reduce your average shipping cost per ton.

Get a Quote in 24 Hours

9 . FAQ

Q: What is 3003 H26 aluminum sheet used for?

A: It is mainly used for manufacturing corrugated roofing sheets, exterior wall panels, and industrial cladding. It is easy to roll into corrugated shapes without breaking, and it offers excellent natural corrosion resistance for outdoor environments.

Q: What is the difference between 3003 H26 and H14 temper?

A: H26 has a higher tensile strength and is harder than H14. For roofing applications, H26 is preferred because it supports heavier wind and snow loads without bending, whereas H14 is softer and mostly used for deep drawing or complex forming processes.

Q: What thickness should I choose for corrugated aluminum roofing?

A: For general use, a thickness between 0.5 mm and 0.8 mm is standard. However, for large industrial projects or areas with extreme weather, we recommend 1.0 mm to 1.2 mm for maximum structural safety.

Q: Is 3003 aluminum corrugated sheet good for outdoor use?

A: Yes. 3003 aluminum naturally forms a protective oxide layer that stops rust. It is highly durable in outdoor environments, including areas with high rainfall and industrial pollution.

Q: How many tons can I fit in a 20ft shipping container?

A: A standard 20ft container can safely hold between 25 to 27 tons of corrugated aluminum sheets, depending on the weight limits of your destination port. We will optimize the packing to help you maximize container space and reduce freight costs.