

SHEET



1. Unifit Metalloys Inc.: Steel Sheet Manufacturer

[Unifit Metalloys Inc.](#) is an **ISO 9001:2015 certified company** and a renowned **manufacturer, supplier, and exporter** of premium quality steel sheets and plates. Based in Mumbai, India, they have built a global reputation over 22 years of operation.

- **Manufacturing Range:** They produce high-performance [Stainless Steel, Carbon Steel, and Alloy Steel sheets](#) in various forms like cold-rolled (CR), hot-rolled (HR), coils, and perforated sheets.
- **Specialized Grades:** As a specialist manufacturer, they offer high-end materials like [253 MA Stainless Steel](#), Monel, Inconel, and [Nickel Alloy sheets](#) designed for extreme corrosion and heat resistance.
- **Quality & Export:** Their manufactured sheets are tested to international standards (ASTM/ASME) and are exported to over 21 countries, serving the petrochemical, defense, and pharmaceutical industries.

2. Types of Steel Sheets

Steel sheets are categorized based on their manufacturing process and material composition:

Type	Manufacturing Process	Key Features
Hot-Rolled (HR)	Rolled at high temperatures.	Cost-effective; easier to form and cut. Ideal for structural construction and pipelines .
Cold-Rolled (CR)	Rolled at room temperature.	Superior surface finish and precise dimensions . Used in appliances and automotive panels.
Galvanized	Coated with a protective zinc layer.	Exceptional resistance to rust and weather . Common in roofing and HVAC systems.

Type	Manufacturing Process	Key Features
Stainless Steel	Infused with chromium.	Highly resistant to corrosion and chemicals. Standard for kitchens, medical tools, and chemical plants.

3. Comparison Table: Sheet vs. Plate

While often confused, the primary difference between a sheet and a plate is the thickness:

Feature	Steel Sheet	Steel Plate
Thickness	Typically \$0.5\text{mm}\$ to \$6\text{mm}\$	Generally above \$6\text{mm}\$
Applications	Bodies of cars, appliances, cans, roofing.	Heavy machinery, ship hulls, bridges, storage tanks.
Form	Available in flat pieces or coiled strips .	Usually provided as large, flat rectangular pieces.

Industrial Steel Sheet Grade Matrix

Material Category	Common Grades	Industry Standards
Stainless Steel	304, 304L, 316, 316L, 310S, 317L, 321, 347, 904L	ASTM A240
Carbon Steel	A36, A516 (Gr. 60/70), A283 (Gr. C), A285 (Gr. C)	ASTM A516, A36
Alloy Steel	Gr. 5, Gr. 9, Gr. 11, Gr. 12, Gr. 22, Gr. 91	ASTM A387
Duplex Steel	S31803 (2205), S32205, S32750 (2507), S32760	ASTM A240
Nickel Alloys	Monel 400, Inconel 600/625/800/825, Hastelloy C276	ASTM B127, B168, B443
Titanium	Grade 1, Grade 2, Grade 5 (Ti-6Al-4V), Grade 7	ASTM B265
Specialty Steel	253 MA , SMO 254	Specialized

Key Selection Criteria

- **Stainless Steel:** The 300-series grades are the "standard" for corrosion resistance. [316L](#) is particularly favored in marine and chemical environments due to its molybdenum content.
- **Pressure Vessels:** Grades like [ASTM A516 Grade 70](#) are manufactured specifically for use in storage tanks and boilers where moderate to lower temperature service is required.
- **High Temperature: Alloy Steel A387** grades (like P11 or P22) are essential for heat exchangers and pressure piping in power plants.
- **Extreme Corrosion:** For highly acidic or saltwater environments, [Nickel Alloys and Duplex grades](#) provide the necessary resistance to pitting and stress cracking.