



Galvanized Steel Coil (GI Coil)

Product Name: Galvanized Steel Coil (GI Coil)

Product Type: Hot-Dip Galvanized Steel Coil

Manufacturer/Supplier: Basekim

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1. PRODUCT DESCRIPTION

Galvanized Steel Coil (GI Coil) is a cold-rolled or hot-rolled carbon steel substrate coated with zinc through a continuous hot-dip galvanizing process. The zinc coating provides excellent corrosion resistance, extended service life, and improved surface durability while maintaining the strength and formability of the underlying steel.

The product is suitable for applications requiring corrosion protection, structural integrity, and good fabrication characteristics.

2. FEATURES AND BENEFITS

Corrosion Resistance

- Zinc coating protects the steel substrate from atmospheric corrosion.
- Provides sacrificial protection against rust formation.

High Strength

- Excellent mechanical properties.
- Suitable for structural and load-bearing applications.

Good Formability

- Suitable for bending, roll-forming, stamping, and drawing operations.

Weldability

- Compatible with conventional welding techniques.

Paintability

- Suitable substrate for painting and coating systems.



Long Service Life

- Enhanced durability in indoor and outdoor environments.

Cost Efficiency

- Reduced maintenance costs compared with uncoated steel.

3. PRODUCT STANDARDS

The product may be manufactured in accordance with the following standards:

Standard	Description
ASTM A653/A653M	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized)
EN 10346	Continuously Hot-Dip Coated Steel Flat Products
EN 10327	Hot-Dip Coated Steel Strip
JIS G3302	Hot-Dip Zinc-Coated Steel Sheets and Coils
ISO 3575	Commercial Quality Hot-Dip Zinc-Coated Steel

4. AVAILABLE STEEL GRADES

Grade	Description
DX51D+Z	General forming grade
DX52D+Z	Drawing quality
DX53D+Z	Deep drawing quality
DX54D+Z	Extra deep drawing quality
S220GD+Z	Structural grade
S250GD+Z	Structural grade
S280GD+Z	Structural grade
S320GD+Z	Structural grade
S350GD+Z	High-strength structural grade
S390GD+Z	High-strength structural grade
S550GD+Z	High-strength structural grade



5. DIMENSIONAL RANGE

Thickness

Parameter	Range
Thickness	0.14 mm – 6.00 mm

Width

Parameter	Range
Width	600 mm – 1,500 mm

Coil Inner Diameter

Parameter	Typical
ID	508 mm
ID	610 mm

Coil Weight

Parameter	Typical
Coil Weight	3 – 25 MT

6. ZINC COATING RANGE

Coating Designation	Total Coating Mass
Z60	60 g/m ²
Z80	80 g/m ²
Z100	100 g/m ²
Z120	120 g/m ²
Z140	140 g/m ²
Z180	180 g/m ²
Z200	200 g/m ²
Z275	275 g/m ²
Z350	350 g/m ²
Z450	450 g/m ²
Z600	600 g/m ²

Available coating range:
20–600 g/m²



7. SURFACE FINISH OPTIONS

Regular Spangle

Visible zinc crystal pattern.

Minimized Spangle

Reduced crystal appearance.

Zero Spangle

Smooth and uniform surface.

Skin Passed

Improved flatness and appearance.

Oiled

Temporary corrosion protection.

Dry

Without oil treatment.

Chromated

Enhanced corrosion resistance.

Non-Chromated

Environmentally preferred option.



8. TYPICAL MECHANICAL PROPERTIES

Commercial Quality Grade (DX51D+Z)

Property	Typical Value
Yield Strength	≥140 MPa
Tensile Strength	270–500 MPa
Elongation	≥22%

Structural Grade (S350GD+Z)

Property	Typical Value
Yield Strength	≥350 MPa
Tensile Strength	≥420 MPa
Elongation	≥16%

Structural Grade (S550GD+Z)

Property	Typical Value
Yield Strength	≥550 MPa
Tensile Strength	≥560 MPa
Elongation	≥3%

Actual values depend on grade and applicable standard.

9. CHEMICAL COMPOSITION (TYPICAL)

Element	Typical Content (%)
Carbon (C)	≤0.25
Manganese (Mn)	≤1.70
Silicon (Si)	≤0.50
Phosphorus (P)	≤0.12
Sulfur (S)	≤0.045
Iron (Fe)	Balance
Zinc (Zn)	Surface Coating

Actual chemistry varies by grade and specification.



10. PHYSICAL PROPERTIES

Property	Value
Density	7.85 g/cm ³
Melting Point (Steel)	1370–1510°C
Melting Point (Zinc)	419.5°C
Thermal Conductivity	Approx. 50 W/m·K
Electrical Conductivity	Moderate
Magnetic Properties	Ferromagnetic

11. FABRICATION CHARACTERISTICS

Suitable Processes

- Roll forming
- Bending
- Stamping
- Press forming
- Deep drawing
- Laser cutting
- Plasma cutting
- Shearing
- Welding

Welding Methods

- Resistance welding
- Spot welding
- MIG welding
- MAG welding
- TIG welding

Proper ventilation should be used during welding due to zinc fume generation.



12. CORROSION PERFORMANCE

The zinc coating acts as:

1. A physical barrier preventing moisture contact.
2. A sacrificial layer protecting exposed steel.

Expected service life depends on:

- Coating weight
- Environmental conditions
- Humidity
- Salt exposure
- Industrial pollutants

Typical service life may exceed 20–50 years in moderate atmospheric environments when properly designed and maintained.

13. APPLICATIONS

Construction

- Roofing panels
- Wall cladding
- Sandwich panels
- Structural framing

Automotive

- Body panels
- Reinforcement parts
- Chassis components

Appliances

- Refrigerators
- Washing machines
- Air conditioning units



Agriculture

- Silos
- Barn structures
- Irrigation equipment

Industrial

- Ducting
- Cable trays
- Storage systems
- Fabricated components

14. PACKAGING

Standard Export Packing

- Waterproof paper
- Anti-rust protection
- Steel edge protectors
- Circumferential steel straps
- Wooden pallets/skids (if required)

Identification

Each coil typically carries:

- Grade
- Thickness
- Width
- Coating weight
- Coil number
- Heat number
- Net weight

15. STORAGE RECOMMENDATIONS

- Store indoors when possible.
- Protect from rain and condensation.
- Avoid contact with corrosive chemicals.



- Ensure proper ventilation.
- Prevent water accumulation between coils.

16. QUALITY ASSURANCE

Inspection may include:

- Thickness measurement
- Width measurement
- Zinc coating weight test
- Surface quality inspection
- Mechanical property testing
- Chemical composition verification
- Coil weight verification

Mill Test Certificates (MTC) available upon request.

17. ORDERING INFORMATION

When ordering, specify:

- Steel grade
- Thickness
- Width
- Zinc coating designation
- Surface finish
- Coil weight
- Applicable standard
- End-use requirements