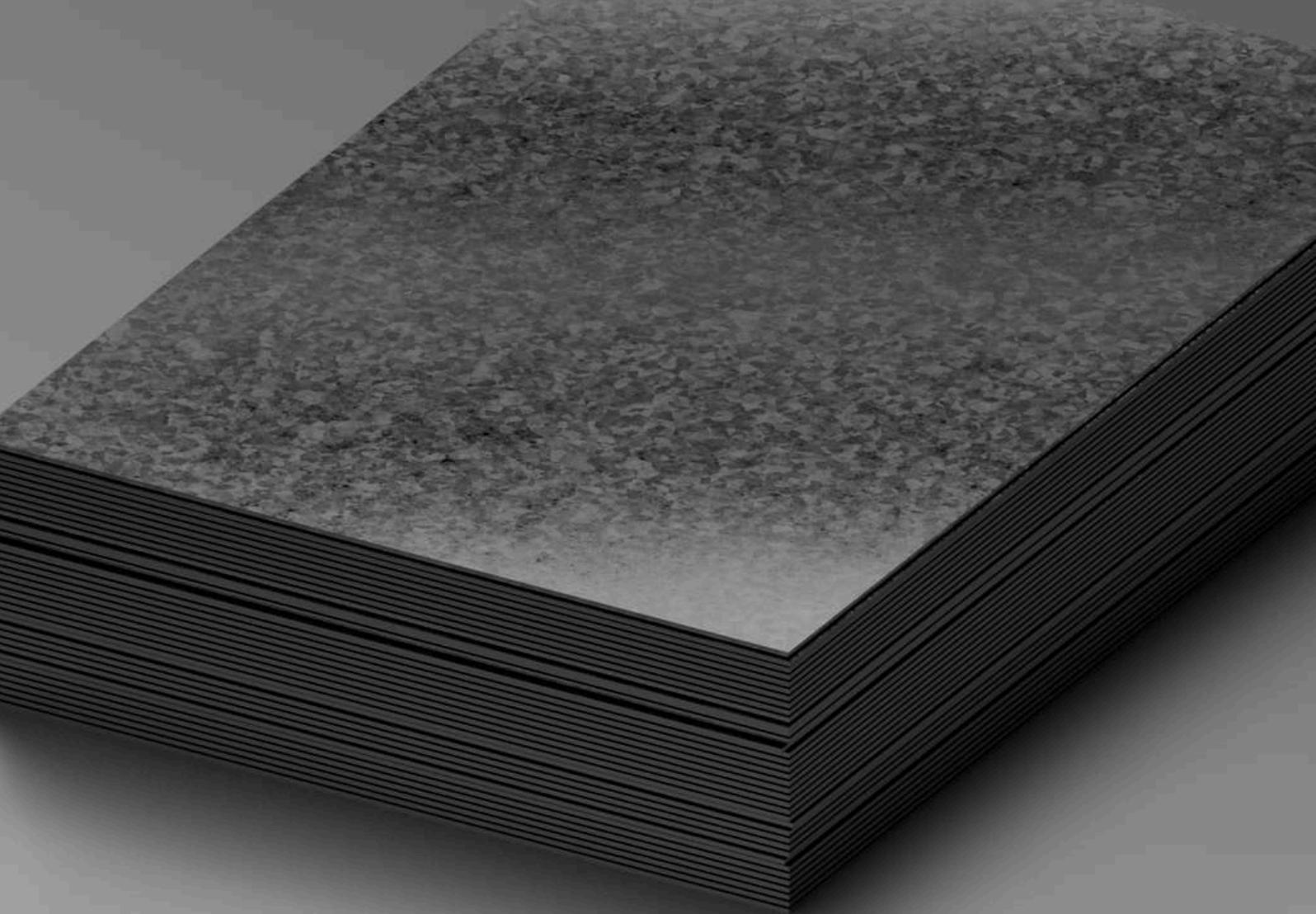


**TECHNICAL DATASHEET**  
**GALVANIZED**



# Galvanized

## Comprehensive Technical Overview

Hot-dip galvanizing is a cost-effective and reliable process for protecting steel against atmospheric corrosion. The zinc coating safeguards the steel through barrier protection and sacrificial galvanic protection for minor coating discontinuities. This process also forms a metallurgical bond with the base steel, creating a fully integrated system. Zinc coatings come in various types, including pure zinc (GI) with regular or minimized spangle and zinc-iron alloy (GA).

### 1. Material Composition

**Base Steel:** Predominantly iron (Fe) with trace elements like carbon (C), manganese (Mn), and silicon (Si).

**Zinc Coating:** Typically 99.5% pure zinc, applied in thicknesses ranging from 40 to 600 g/m<sup>2</sup>.

### 2. Galvanizing Process

**Hot-Dip Galvanizing:** Steel is immersed in molten zinc, creating a strong metallurgical bond.

**Cold Dip Galvanizing:** A zinc solution is applied for surface adhesion.

### 3. Applications

- Food & Beverage Cans: Provides strength and corrosion resistance.
- Can Lids: Ensures a tight seal and prevents rust.
- Construction & Industrial: Widely used in building materials and machinery.
- Automotive: Excellent for paint adhesion and resistance spot welding.

### 4. Technical Specifications

#### **Mechanical Properties:**

- Tensile Strength: 400–550 MPa
- Yield Strength: 250–350 MPa
- Elongation: Minimum 20% in 50 mm
- Quality Standards:
- ASTM A123: Structural steel
- ASTM A653: Hot-dip galvanized steel for construction
- ISO 1461: International hot-dip galvanizing standard



## **5. Surface Finishes**

- Pure Zinc (GI): Available with regular or minimized spangle, suitable for painting applications.
- Zinc-Iron Alloy (GA): Offers superior paint adhesion and spot welding properties, ideal for automotive uses.
- Custom Finishes: Bright, dull, or matte surfaces tailored to specific applications.

## **6. Handling and Storage Guidelines**

- Use gloves and safety glasses to prevent injury during handling.
- Store in dry, ventilated areas to avoid moisture damage.
- Handle gently to prevent scratches or coating damage.
- Clean regularly with mild soap and water—avoid acidic or abrasive cleaners.
- Repair damaged coatings with a cold zinc application.
- Avoid contact with incompatible metals like copper or aluminum to prevent galvanic corrosion.

## **7. Why Choose Galvanized Steel?**

- Wide thickness range for diverse applications.
- Rust-resistant, long-lasting coating.
- Customizable hardness and finishes.
- Bendable and formable without flaking.

## **Contact Us**

For detailed technical information or tailored specifications, contact our expert team today.



# STEEELFORCE

P A C K A G I N G

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