

Introduction

304 precision stainless steel strips are a cornerstone of modern industrial design, known for their exceptional corrosion resistance, formability, and versatility. As an austenitic chromium-nickel alloy (18% Cr, 8–10% Ni per ASTM A240), they serve critical roles in sectors ranging from medical devices to aerospace.

Chemical Composition

Element Content (%)	Content Range
Carbon (C):	≤0.08
Chromium (Cr)	18.0–20.0
Nickel (Ni)	8.0–10.5
Manganese (Mn)	≤2.00
Silicon (Si)	≤1.00
Phosphorus(P)	≤0.045
Sulfur (S)	≤0.030

Key Notes:

- Low carbon variants (304L) reduce weld corrosion risk ($C \leq 0.03\%$).

Mechanical Properties

Temper State	HV Range	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)
Annealed (ANN)	≤200	≥205	≥480	≥40
1/4 Hard	220–250	≥450	≥650	≥15
1/2 Hard	250–310	≥470	≥780	≥6
3/4 Hard	310–370	≥665	≥930	≥3
Full Hard	370–420	≥880	≥1130	

Application-Specific Hardness Selection

1. Annealed (ANN)

- Properties: Maximum ductility, easy formability.
- Uses: Deep-drawn kitchenware, medical trays, architectural trim.

2. 1/4 Hard & 1/2 Hard

- Properties: Balanced strength/formability, moderate springiness.
- Uses: Automotive clips, electronic connectors, springs.

3. 3/4 Hard & Full Hard

- Properties: High wear resistance, limited plasticity.
- Uses: Cutting blades, industrial shims, high-stress springs.

4. Full Hard (FH)

- Properties: High strength, brittle.
- Uses: Precision shafts, aerospace fasteners.

Product Specifications

Parameter	Value
Thickness	0.01-0.05mm
Width	2.0-300mm
Tolerance	T: +/- 0.003mm, W: +/- 0.10mm
Forms	Strip Coil
Surface Finish	BA, 2B
Lead Time	7-10 working days
MOQ	100 kg