

Type 305 Stainless Steel is an austenitic chromium nickel stainless steel. Type 305 stainless can be spun and deep drawn more easily due to an increased nickel content that decreases work hardening. Directionality introduced during cold rolling process must be kept to a minimum amount to limit earring during the drawing process.

Type 305 DDQ is nonmagnetic in the annealed and cold worked conditions and has corrosion resistance similar to 304/304L stainless steel. Applications such as complex conical shapes, expanded metal parts, small diameter deep containers or sleeves, and spinning metal are common uses for Type 305 Stainless.

Nominal Composition %

C	Carbon - 0.12% maximum
Mn	Manganese - 2.00% maximum
Si	Silicon - 1.00% maximum
Cr	Chromium - 17.00 - 19.00%
Ni	Nickel - 10.00 - 13.00%
Mo	Molybdenum - 0.75% maximum
P	Phosphorous - 0.040%
S	Sulfur - 0.030% maximum
Cu	Copper – 0.75% maximum
Fe	Iron - Balance

Percent by weight, maximum unless a range is listed.

Standard Inventory Specifications

- UNS 30500
- ASTM 5514
- ASTM A240

Forms Stocked

- Custom Strip

Thickness Stocked

- 0.0008" - 0.015" thick

Applications

- Deep draw and spun components
- Eyelets
- Electronics
- Food Processing
- Kitchen utensils
- Appliances



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Features

- Increased nickel content decreases work hardening
- Corrosion resistance similar to 304/304L Stainless

The technical data provided is for information only and not for design purposes. It is not warranted or guaranteed.

Linear Coefficient of Thermal Expansion

Temperature Range		Mean Coefficient of Thermal Expansion	
°C	°F	mm/mm/°C	in/in/°F
20-100	68-212	16.6×10^{-6}	9.2×10^{-6}
20-870	68-1600	19.8×10^{-6}	11.0×10^{-6}

Physical Properties

Property	Value
Density g/cm ³	8.03
Density lb/in ³	0.29
Modulus of Elasticity in Tension	29×10^6 psi (200 GPa)

Thermal Conductivity

Temperature Range		W/m · K	Btu/(hr/ft ² /in/°F)
°C	°F		
100	212	16.3	9.4
500	932	21.4	12.4

Electrical Resistivity

°C	°F	Microhm-cm	Microhm-in
20	68	72	28.3
100	212	78	30.7
200	392	86	33.8
400	752	100	39.4
600	1112	111	43.7
800	1472	121	47.6
900	1652	126	49.6