

Products & Sizes

Coil	Sheet	Precision Reroll Strip
0.020" - 0.125"	0.020" - 0.125"	0.0008" - 0.015"

301 Chemical Composition

	Element	Min	Max
C	Carbon	-	0.150
Mn	Manganese	-	2.000
P	Phosphorus	-	0.045
S	Sulfur	-	0.030
Si	Silicon	-	1.00
Cr	Chromium	16.00	18.00
Ni	Nickel	6.000	8.000
N	Nitrogen	-	0.10

Industry Standards

- EN 1.4310
- PWA-LCS
- GE Aircraft Engine (GT193)
- GE Aviation S-SPEC-35 AeDMS S-400
- RR SABRe Edition 2
- DFARS Compliant

Industry Applications

- Aircraft structural parts
- Trailer bodies
- Architectural (roof drainage/door frames, etc.)
- Auto body trim and wheel covers
- Utensils and tableware
- Conveyor parts

Related Industries

Aerospace

Defense

Medical

Space

Physical Properties

Property	Value
Density	0.2850 lb/in ³ (7.88g/cm ³)
Melting Range	2250 - 2950°F (1399 - 1421°C)
Specific Gravity	8.03
Modulus of Elasticity in Tension	28x10 ⁶ psi (193 GPa)
Magnetic Permeability	1.02 Max @ 200 H

Linear Coefficient of Thermal Expansion			
Temperature Range		Coefficients	
°C	°F	cm/cm°C	in/in/°F
20-100	68-212	16.6·10 ⁻⁶	9.2·10 ⁻⁶
20-300	68-572	17.6·10 ⁻⁶	9.8·10 ⁻⁶
20-500	68-932	18.6·10 ⁻⁶	10.3·10 ⁻⁶
20-700	68-1292	19.5·10 ⁻⁶	10.8·10 ⁻⁶
20-871	68-1600	19.8·10 ⁻⁶	11.0·10 ⁻⁶

Thermal Conductivity			
Temperature Range		Coefficients	
°C	°F	W/m·K	Btu/(hr·ft ² /hr/°F/ft)
20-100	68-212	16.30	9.40
20-500	68-932	21.40	12.4

Specific Heat			
Temperature Range		J/kg°K	Btu/lb/°F
°C	°F		
0-100	32-212	500	0.12

Electric Resistivity			
Temperature Range		microhm-cm	microhm-in
°C	°F		
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

Mechanical Properties

Type 301 is used in the annealed and cold rolled conditions. In the work-hardened condition, Type 301 develops higher tensile strength than the other stable austenitic grades. Minimum properties for plate, sheet and strip per ASTM A240 and A666 follow.

Minimum Room Temperature Mechanical Properties Per, ASTM A240 and A666 Specifications					
Condition	Tensile Strength, Min.		0.2% Yield Strength, Min.		Elong. In 2" (50mm)
	Ksi	MPa	Ksi	MPa	%, Min.
Annealed	75	515	30	205	40
1/4 Hard	125	862	75	517	25
1/2 Hard	150	1034	110	758	18 [*]
3/4 Hard	175	1207	135	931	12 [*]
Full Hard	185	1276	140	965	9 [*]

* Value shown for thickness greater than 0.015 in. (.038mm).