

Alloy 410S stainless steel is a low carbon modification of Type 410 stainless steel. Low carbon and optionally a small addition of titanium and/or columbium minimize austenite formation at high temperatures, thereby restricting the alloy's ability to harden. The material remains soft and ductile even when the material is rapidly cooled from above the critical temperature. This low hardening characteristic helps to prevent cracking when the steel is welded or exposed to high temperatures. The alloy is completely ferritic in the annealed condition. 410S is ferromagnetic.

Specifications

UNS: \$41008 W. Nr./EN: 1.4000 ASTM: A 240 ASTM: \$A-240

Chemical Composition, %

	Cr	Mn	Ni	C	Si	P	S	Fe
MIN	11.5	-	-	-	-	-	-	-
MAX	13.5	1.0	0.6	0.08	1.0	0.04	0.03	balance

Features

- Increased weldability over 410
- Maintains ductility even when heated and quenched

Applications

- Tower packing
- Distillation trays
- Automotive exhaust components
- Quenching racks

Physical Properties

Density: 0.280 lb/in³ **Melting Range:** 2700 - 2790°F

Temperature, °F	212	600	1000	1200
Coefficient of Thermal Expansion* in/in°F x 10 ⁻⁶	6.0	6.4	6.7	7.5
Thermal Conductivity Btu • ft/ft² • hr • °F	187	_	-	_
Modulus of Elasticity, Dynamic psi x 10 ⁶	29.0	_	-	_

^{* 70°}F to indicated temperature.

Mechanical Properties

Tensile Properties

	Minimum (Plate)	Typical
Ultimate Tensile Strength, ksi	60	64.4
0.2% Yield Strength, ksi	30	42
Elongation, %	22	33
Hardness, Rb	89 (max)	75
Cold Bend, °	180	pass

claudioczarnobai@intwinds.com +55 (11) 3825 2966 www.itwmetals.com.br





CLAUDIO CZARNOBAI

COMMERCIAL MANAGER ClaudioCzarnobai@intwinds.com

F +55 11 3825 2966

C +55 11 99112 2703





www.itwmetals.com.br Bulletin No. 121BZp 03/15

Rolled Alloys, RA are registered trademarks of Rolled Alloys
The data and information in this printed matter are believed to be reliable. However, this material is not intended as a substitute for competent professional engineering assistance which is a requisite to any specific application. Rolled Alloys makes no warranty and assumes no legal liability or responsibility for results to be obtained in any particular situation, and shall not be liable for any direct, indirect, special, or consequential damage therefrom. This material is subject to revision without prior notice.