# **Specification Sheet: Alloy 410S**

(UNS S41008) W. Nr. 1.4000

# **Restricted Carbon Modification of 410 that Prevents Hardening** and Cracking when Exposed to High Temperatures or Welding

## **Chemical Analysis**

Typical analysis (Weight %)

Cr	Ni	С	Mn		
14.5 م	0. 0 、.	0.0 , .	1.00 .		
Р	S	Si	Fe		
0.040 \ .	0.030 .	1.00 , .	1 1400. *		
"THE INTERPOLATION TO TO AND THE CONTROL OF THE CON					

#### **Physical Properties**

Density

Magnetic Permeability

Thermal Conductivity 212°F (100°C)

Specific Heat

**Electrical Resistivity** 

Melting Range

2 00 2 0,1 14 0 1530

**Linear Mean Coefficient of Thermal Expansion** 

	In/in°F	um/m-°K
32 212 <sub>•</sub> 1 (0 100 <sub>•</sub> )	.0 10 <sup>-</sup>	10.
32 00 <sub>•</sub> 1 (0 315 <sub>•</sub> )	.4 10 <sup>-</sup>	11.5
32 1000, (0 53, )	. 10 <sup>-</sup>	12.2
32 1200, (0 4, )	.5 10 <sup>-</sup>	13.5

# **Mechanical Properties**

Typical Room Temperature Mechanical Properties, Mill Annealed						
	0.2% Offset Yield Strength psi (MPa) Ultimate Tensile Strength psi (MPa)		Elongation percent in 2" (50mm)	Reduction percent of area	Hardness Rockwell B	
42,000	(290)	64,400	(444)	33	65	75

#### **Standards**

**ASTM**...... 240 ASME...... 240



### **Corrosion Resistance**

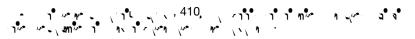


**General Corrosion Behavior Compared With Other** Nonaustenitic Stainless Steels\*

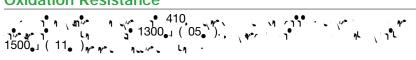
5% Test Solution at 120°F (49°C)	Alloy 409	Alloy 410S	Alloy 420	Alloy 425 Mod	Alloy 440A	Alloy 430
Acetic	0.88	0.079	1.11	4.79	2.31	0.025
Acid	(0.022)	(0.002)	(0.028)	(0.122)	(0.0586)	(0.0006)
Phosphoric	0.059	0.062	0.068	0.593	0.350	0.029
Acid	(0.002)	(0.002)	(0.002)	(0.015)	(0.00956 (	)218.3 ( )218.3



()Mr1 1 1 SQG6 0. Q 0.350 0.029



#### **Oxidation Resistance**

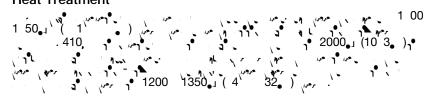


#### **Fabrication Data**

### Formability

410, To the to t

#### **Heat Treatment**



#### Machining



#### Welding

