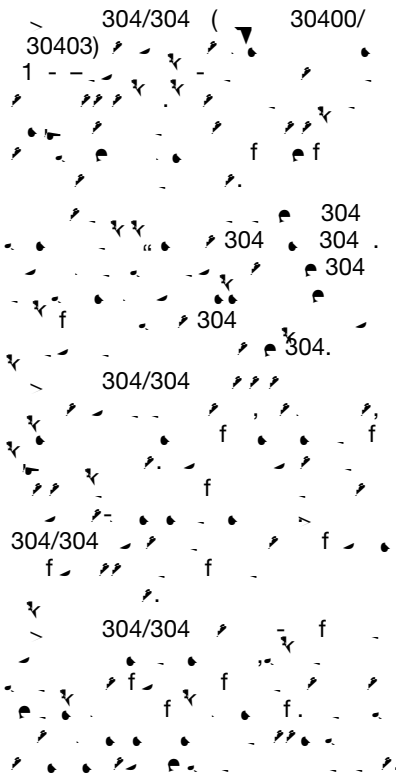


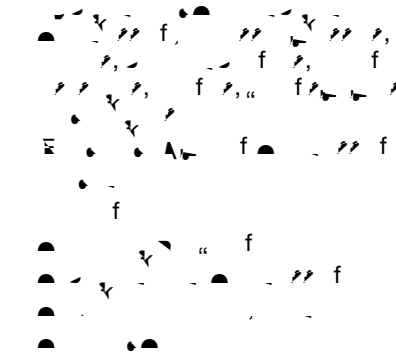
# Specification Sheet: Alloy 304/304L

(UNS S30400, S30403) W. Nr. 1.4301, 1.4307

**Most Widely Used Austenitic Stainless Steel, a Versatile Corrosion Resistant Alloy for General Purpose Applications**



## Applications



## Standards

ASTM ..... 240  
 ASME ..... 240  
 AMS ..... 5511/5513  
 QQ-S ..... 766

## Chemical Analysis

Weight % (all values are maximum unless a range is otherwise indicated)


## Physical Properties

<b>Density</b> 0.25 / 3 7.0 f / 3	<b>Specific Heat</b> 0.12 / (32-212) 500 l / f (0-100)
<b>Modulus of Elasticity</b> 2.0 10 <sup>6</sup> 200	<b>Thermal Conductivity 212°F (100°C)</b> .4 / 26 / 16.3 /
<b>Melting Range</b> 2550-2505 13-1421	<b>Electrical Resistivity</b> 2.1 - 6 74 - 20

## Mean Coefficient of Thermal Expansion

Temperature Range		ASTM	
°F	°C	in/in/°F	cm/cm °C
6-212	20-100	.2 10 <sup>-6</sup>	16.6 10 <sup>-6</sup>
6-32	20-500	10.6 10 <sup>-6</sup>	1.2 10 <sup>-6</sup>
6-1600	20-70	11.0 10 <sup>-6</sup>	1. 10 <sup>-6</sup>

## Mechanical Properties

ASTM	ASTM		
	Typical*	Type 304	Type 304L
0.2% $\sigma_{0.2}$	42	30	25
$\sigma_{0.01}$	7	75	70
$\sigma_{0.001}$	5	40	40
$\sigma_{0.0001}$	70		
$\sigma_{0.00001}$	2	2	2

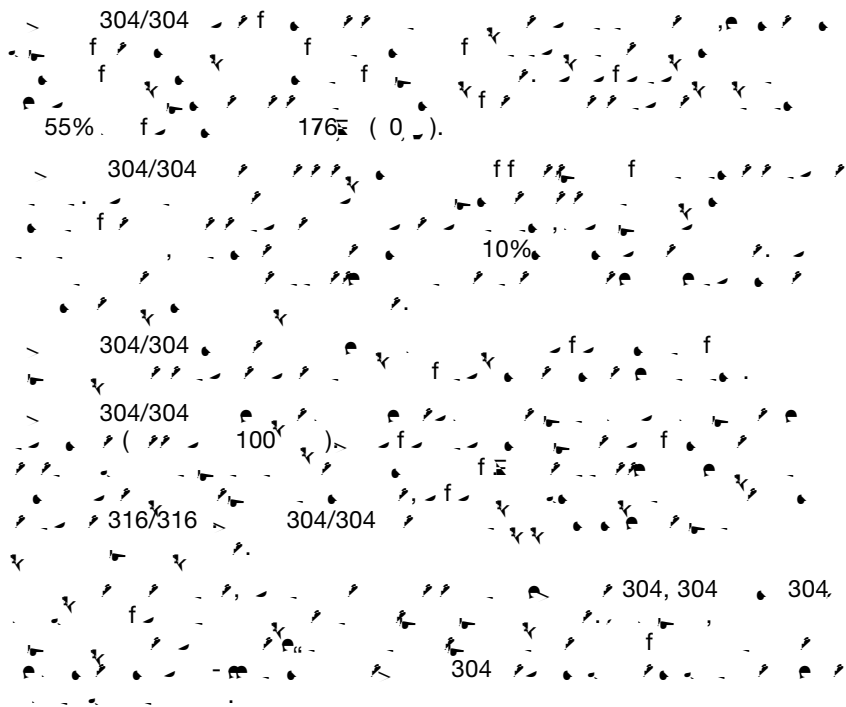
\*0.375 inch plate



**SANDMEYER STEEL COMPANY**

1 116-35  
 00-523-3663 +1-215-464-7100 +1-215-677-1430

## Corrosion Resistance



Lowest Temperature (°F) at Which the Corrosion Rate Exceeds 5 mpy

0.2%	f	f	f	f
1%	6	6	15	f
10%	.	122	140	167
60%	.	54	5	57
6%	.	113	77	6
5%	176	203	14	203
10%	f	f	f	f
65%	212	212	221	230
0%	212	f	f	f
50%	≤50	104	14	14
50%	15	14	14	230
3%	113	14	122	140
2%	.	.	.	.
60%	140	140	140	140
2%	.	.	.	.
50%	f	24	212	230
50%	.	.	.	.
1%	6	77	113	203
0.3%	.	.	.	.
10%	.	77	5	122
2000	.	.	.	.
10%	.	5	5	104
2000	.	.	.	.
1,	50	≤50	113	203
2,	50	≤50	140	.

ps = pitting can occur

ps = pitting/crevice corrosion can occur

## Fabrication Data

304/304

Hot Forming  
 1652 r 2102 (750 r 1150)  
 1 00 (103)

Cold Forming

Welding  
 304/304

Machining  
 304/304

Tool		Lubrication		CONDITIONS			
		6	.23	0.5	.01	13 r 1	42.6 r 5
		3	.11	0.4	.016	20 r 25	65.6 r 2
		1	.04	0.2	.00	26 r 31	5.3 r 101.7
		6	.23	0.5	.01	75 r	5.3 r 6

.23 5.3 5.3 .00 266 .23 1 .04



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