



Stainless Steel Alloy Guide

1243 Old Bernville Rd
Leesport, PA 19533
Phone: (610) 926-4111 Fax: (610) 926-4198

Note: The information provided is for reference only.

Email: sales@eaglebrass.com
www.eaglebrass.com

	Nickel	Austenitic Stainless Steel						Ferritic Stainless Steel	Low Carbon Steel	
Alloy Name	200/201	301	302	304	304L	305	316	316L	430	1008
ASTM	B162	A666	A666	A666	A666	A240	A666	A666	A240	A109

ALLOY COMPOSITION %

Carbon	max	C	0.07	0.15	0.15	0.08	0.03	0.12	0.08	0.03	0.12	0.1
Managnese	max	Mn	0.35	2	2	2	2	2	2	2	1	0.15
Sulfur	max	S	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.035
Phosphorus	max	P		0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.04	0.03
Silicon	max	Si		1	0.75	0.75	0.75	0.75	0.75	0.75	1	
Chromium		Cr		16-18	17-19	18-20	18-20	17-19	16-18	16-18	16-18	
Nickel		Ni	Bal	6-8	8-10	8-10.5	8-12	10.5-13	10-14	10-14		
Molybdenum		Mo							2-3	2-3		
Iron		Fe	.25 max									Bal

PHYSICAL PROPERTIES

DENSITY	A	0.321	0.285	0.285	0.285	0.285	0.286	0.286	0.286	0.278	0.284
MOD. OF ELAST.	B	30	28	28	28	28	28	28	28	29	29
ELEC. RESISTIVITY	C	57	432	432	432	432	455	445	445	360	78
THERMAL COND.	D	306	113	113	113	113	107	110	110	181	250
COEF OF THERM. EXP.	E	8.9	10.4	10.4	10.4	10.4	10.5	10.3	10.3	6.6	8.8

MECHANICAL PROPERTIES

ANNEALED	TENSILE	F	55 min	75 min	75 min	75 min	70 min	70 min	75 min	70 min	65 min	35-50
	YIELD	G		30 min	30 min	30 min	25 min	25 min	30 min	25 min	30 min	
	ELONG.	H	40 min	40 min	40 min	40 min	40 min	40 min	40 min	40 min	20 min	35 min
1/8 HARD	TENSILE		52-65	100 min	100 min	100 min	100 min		100 min	100 min		
	YIELD			55 min	55 min	55 min	55 min		55 min	55 min		
	ELONG.		30-40	40 min	35 min	35 min	35 min		30 min	30 min		
1/4 HARD	TENSILE		55-70	125 min	125 min	125 min	125 min	125 min	125 min	125 min	78-90	45-65
	YIELD			75 min	75 min	75 min	75 min	75 min	75 min	75 min	60-78	
	ELONG.		20-35	25 min	10 min	10 min	10 min	6 min	10 min	10 min	60-78	13-27
1/2 HARD	TENSILE		60-90	150 min	150 min	150 min	150 min	150 min	150 min	150 min	90-100	55-75
	YIELD			110 min	110 min	110 min	110 min	110 min	110 min	110 min	75-95	
	ELONG.		15-25	15 min	9 min	6 min	6 min	6 min	6 min	6 min	2-10	4-16
3/4 HARD	TENSILE		70-90	175 min	175 min	175 min	175 min		175 min	175 min		
	YIELD			135 min	135 min	135 min	135 min		135 min	135 min		
	ELONG.		5-10	10 min	5 min							
FULL HARD	TENSILE		90 min	185 min	185 min	185 min	185 min		185 min	185 min	107 min	80 min
	YIELD			140 min	140 min	140 min	140 min		140 min	140 min	100 min	
	ELONG.			8 min	3 min	1 min	1 min		1 min	1 min	1 min	

A Lbs. per cu. In. at 68 °F (annealed) (x27.68 gms./cu. Cm. at 20 ° C)

B x 10⁶ PSI, tension

C OHM/CMF as annealed at 68°F(20°C)

D BTU per sq. ft. per ft. per hr. per F ° at 68° F(20°C)

E mean from 68°F to 1200 °F (20°C to 649°C)

F X 1000 = PSI

G x 1000 = PSI (0.2% offset)

H % in 2 inches



1243 Old Bernville Rd
Leesport, PA 19533
Phone: (610) 926-4111 Fax: (610) 926-4198

Stainless Steel Alloy Guide

Note: The information provided is for reference only.

Email: sales@eaglebrass.com
www.eaglebrass.com

Capabilities

Gauge Range	.002" - .060"
Width Range	.060" - 14.000"
Tempers	All Tempers Annealed DDQ to Full Hard

Coil Size

I. D.	3" , 4" , 6" , 8" , 10" , 12" , 16" , 20"
O. D.	54" max.
Coil Weight	10,000 lbs. max.
Order Weight	100 lb. minimum

Toll Processing

Processes	Rolling, Annealing, Leveling, Slitting, Traverse Winding
Edges	#3 slit, Deburred, Round
Traverse Winding	500, 1000, 2000 lb. Traverse Wound Reels