

303 stainless steel is a non-magnetic austenitic stainless steel which is not hardenable by heat treatment. It is the free-machining modification of the basic 18% chromium -8% nickel stainless steel.

# **Specifications**

UNS: \$30300 W. Nr./EN: 1.4305 ASTM: A 582, A 314, A 484 AMS: 5640R

### Chemical Composition, %

	Cr	Ni	C	Mn	P	S	Si	Fe	Mo
MIN	17.0	8.0	_	-	_	0.15	_	1	_
MAX	19.0	10.0	0.15	2.0	0.2	_	1.0	balance	0.6 (optional)

#### **Features**

- Improved machinability over 304/304L and 316/316L stainless
- Melted and processed to maximize machinability

## **Applications**

- Conveyor systems
- Automatic screw machines

# **Physical Properties**

Density: 0.290 lb/in<sup>3</sup> Melting Point: 2552 °F Thermal Conductivity at 212°F: 113.2 (Btu x in)/(hr x ft<sup>2</sup> x °F)

## **Mechanical Properties**

### **Typical Tensile Properties**

Tensile Strength, ksi	75
Yield Strength, ksi	30
% Elongation in 2 inches	35
% Reduction of area	50

### Feeds and Speeds

### Starting Feeds and speeds with high speed tooling (Annealed Type 303\*)

Tool	Inch	Speed, sfpm**	Feed, inches/revolution	
Form Tool (width)	1/4	110	0.0026	
	1/2	105	0.0022	
	3/4	100	0.0019	
Box Tool (depth)	1	115	0.0065	
	1/8	105	0.0060	
	1/4	100	0.0055	
Twisting Drill (diameter)	1/4	65	0.0045	
	1/2	70	0.0050	
	3/4	75	0.0055	
Sizing Reamer	½ and under	90	0.0055	
	½ and over	90	0.0085	
Finishing Reamer	All	35	0.0035	
Tapping (Cut Threads)	-	15/30	-	

<sup>\*</sup> As Processed for Best Machinability, \*\*sfpm = Surface feet per minute

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





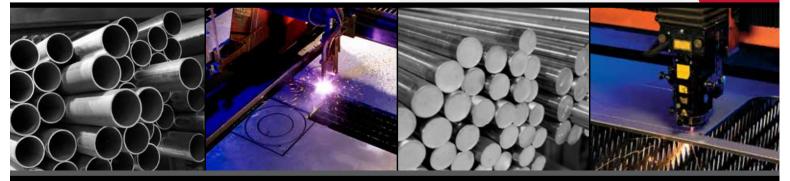
**CLAUDIO CZARNOBAI** 

COMMERCIAL MANAGER ClaudioCzarnobai@intwinds.com

**F** +55 11 3825 2966

C +55 11 99112 2703





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