

Prodec® is a unique version of austenitic stainless steel which is produced for enhanced machinability and exceptional uniformity. Prodec®304P/304LP is an improved version of standard Type 304/304L. With advanced ladle metallurgy techniques, the steel is processed for improved machinability and outstanding uniformity. 304P/304LP offers faster machining speeds, longer tool life, improved part quality, and a lower total cost of machined parts.

## Specifications

**UNS:** S30400, S30403  
**AMS:** 5511, 5513

## Chemical Composition, %

Element	Maximum Unless Range is Specified
Carbon	0.030
Manganese	2.00
Phosphorus	0.045
Sulfur	0.030
Silicon	0.75
Chromium	18.0-20.0
Nickel	8.0-11.0
Molybdenum	0.75
Nitrogen*	0.10

## Features

- Maintains tighter dimensional tolerances and produces a superior surface finish
- Ensures corrosion resistance equal to conventionally produced plate
- Permits higher machining speeds, longer tool life, and superior part quality

## Applications

- Vacuum processing equipment
- Specialized instruments requiring high integrity

## Physical Properties

Physical Properties	
Density, lb/in <sup>3</sup>	0.285
Modules of Elasticity, psi	29 x 10 <sup>6</sup>
Coefficient of thermal Expansion, 68 - 212°F/F°	8.9 x 10 <sup>-6</sup>
Thermal Conductivity, Btu/ft hr°F	8.7
Heat Capacity, Btu/lb°F	0.12
Electrical Resistivity, Ω-inch	33.5 x 10 <sup>-6</sup>

## Mechanical Properties

PRODEC® 304P/304LP cannot be hardened by heat treatment. However, PRODEC® 304P/304LP can be hardened by cold working. PRODEC® 304P/304LP should be heated to 1900°F minimum, then water quenched or rapidly cooled by other means.