

This page is mainly introduced the 304L Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 304L, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 304L

| 304L Standard Number: | | |
|-----------------------|-----------------|---|
| ITEM | Standard Number | Descriptions |
| 1 | MIL-DTL-23196E | Steel plate, corrosion resistant, austenitic (UNS S30400, S30403, S31600, S34700, and S34800) |
| 2 | MIL-P-1144D | Pipe, corrosion-resistant, stainless steel, seamless or welded |
| 3 | MIL-S-23196 | Steel plate, corrosion resistant, austenitic (UNS S30400, S30403, S31600, S34700, and S34800) |
| 4 | MIL-S-4043B | Steel; Corrosion-resisting (extra low carbon type 304), plate, sheet, and strip |
| 5 | MIL-S-862B | Steel bar, corrosion resisting, and steel billet, corrosion resisting, reforging application |
| 6 | MIL-T-8973 | Tubing, steel, corrosion and heat resistant, for aerospace vehicle hydraulic systems assembled by brazing |

| 304L Chemical composition(mass fraction)(wt.%) | | | | | | | | | |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | | | | | 0.030 | | | |
| Si | | | | | | 1.00 | | | |
| Mn | | | | | | 2.00 | | | |
| P | | | | | | 0.045 | | | |
| S | | | | | | 0.03 | | | |
| Cr | | 18.0 | | | | 20.0 | | | |
| Ni | | 8.00 | | | | 10.0 | | | |
| N | | | | | | 0.10 | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Tubing, steel, corrosion and heat resistant, for aerospace vehicle

hydraulic systems assembled by brazing

304L Physical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | σ_b /MPa |
| Yield Strength | 23 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 65 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 123-321 | - |
| HRC | 30 | - |

304L Mechanical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | σ_b /MPa |
| Yield Strength | 154 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 56 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 235-268 | - |
| HRC | 30 | - |

304L Heat Treatment Regime

| Annealing | Quenching | Tempering | Normalizing | Q & T |
|-----------|-----------|-----------|-------------|-------|
| √ | √ | √ | √ | √ |

304L Range of products

| Product type | Products | Dimension | Processes | Deliver Status |
|-----------------|--|----------------------------|---|---|
| Plates / Sheets | Plates / Sheets | 0.08-200mm(T)*W*L | Forging, hot rolling and cold rolling | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar | Round Bar, Flat Bar, Square Bar | Φ 8-1200mm*L | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting, |
| Coil / Strip | Steel Coil /Steel Strip | 0.03-16.0x1200mm | Cold-Rolled & Hot-Rolled | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded | Annealed, Solution and Aging, Q+T, ACID- |

| | | | | |
|--|--|--|--|--------|
| | | | | WASHED |
|--|--|--|--|--------|

We can produce Specialsteel the specifications follows: