# 310S/310H
# UNS S31008/S31009

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## DESCRIPTION

Stainless steel 310S/310H is an austenitic heat resistant alloy with excellent resistance to oxidation under mildly cyclic conditions through 2000°F. Its high chromium and nickel contents provide comparable corrosion, superior resistance to oxidation and the retention of a larger fraction of room temperature strength than the common austenitic alloys like Type 304.

| CR | NI | C | SI | MN | P | S | MO | CU | FE |
|---|---|---|---|---|---|---|---|---|---|
| 24.0-26.0 | 19.2-22.0 | MAX .25 | MAX 1.50 | MAX 2.00 | MAX .045 | MAX .03 | MAX .75 | MAX .50 | Balance |

## TYPICAL APPLICATIONS

- Heat exchanger and heat recuperator tubing
- Molten salt applications
- Sulfur-bearing gas atmospheres

## TENSILE REQUIREMENTS

| TEMPERATURE (°F) | TENSILE STRENGTH KSI (MIN.) | YIELD STRENGTH KSI (MIN.) |
|---|---|---|
| 70 | 80.0 | 35.0 |
| 1000 | 67.8 | 20.8 |
| 1200 | 54.1 | 20.7 |
| 1400 | 35.1 | 19.3 |
| 1600 | 19.1 | 12.2 |

## PRODUCT CAPABILITIES

J&J Alloys produces a wide selection of fittings, flanges, and custom components tailored to customer specifications and technical drawings. For custom inquiries or additional details, please contact your J&J Alloys sales representative.

| PRODUCT | SIZE (NPS) | PRODUCT | SIZE (NPS) | PRODUCT | SIZE (NPS) |
|---|---|---|---|---|---|
| SW/THRD Couplings | 1/8" - 8" | SW/THRD 90s | 1/2" - 4" | BW Tees | 1/2" - 10" |
| SW/THRD Half Couplings | 1/8" - 8" | SW/THRD 90s (Block Pattern) | 1/2" - 4" | BW LR/SR 90s (Block Pattern) | 1/2" - 4" |
| THRD Plugs (Hex/Round/Square) | 1/8" - 6" | SW/THRD Tees | 1/2" - 4" | BW Cross (Block Pattern) | 1/2" - 12" |
| THRD Hex Bushings | 1/8" - 6" | SW/THRD Cross (Block Pattern) | 1/2" - 4" | Pipe Nipples | 1/4" - 8" |
| SW/THRD Inserts | 1/8" - 4" | SW/THRD Caps | 1/2" - 6" | Studding Outlets (Flat Bottom) | 1/2" - 24" |
| BW/SW/THRD Unions | 1/8" - 4" | BW Caps (Dome Shaped) | 1/2" - 24" | ASME B16.5 (dims) Flanges | 1/2" - 24" |
| Olets (TOL, SOL, WOL, EOL, LOL) | 1/8" - 24" | MSS (Short) Stub Ends | 1/2" - 60" | ASME B16.47 Flanges Series A&B | 26" - 60" |
| Conc/Ecc Swages | 1/2" - 8" | ASA (Long) Stub Ends | 1/2" - 60" | Taper Bore BW 45s | 1/2" - 30" |
| SW/THRD 45s | 1/2" - 4" | BW Concentric Reducers | 3/4" - 30" | Taper Bore BW 90s | 1/2" - 30" |
| SW/THRD 45s (Block Pattern) | 1/2" - 4" | BW Eccentric Reducers | 3/4" - 24" | Taper Bore BW Tees | 1/2" - 30" |

**NOTE:** The information on this sheet have been compiled from a variety of sources, and should be considered as a general guide only. The information and data included are accurate to the best of our knowledge, and may be revised at any time without notice. J&J Alloys assumes no responsibility for the accuracy of this information.