

This page is mainly introduced the SA-312 TP309H Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SA-312 TP309H, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel SA-312 TP309H

SA-312 TP309H Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--|
| 1 | SA-312 TP309H | Specification for Seamless and Welded Austenitic Stainless Steel Pipes |

SA-312 TP309H Chemical composition (mass fraction) (wt.%)

| Chemical | | Min.(%) | | | | | Max.(%) | | | |
|----------|----|---------|----|----|----|----|---------|----|-------|--|
| C | | | | | | | 0.08 | | | |
| Si | | | | | | | 0.75 | | | |
| Mn | | | | | | | 2.00 | | | |
| P | | | | | | | 0.045 | | | |
| S | | | | | | | 0.030 | | | |
| Cr | | 22.0 | | | | | 24.0 | | | |
| Ni | | 12.0 | | | | | 15.0 | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other | |
| | | | | | | | | | | |

Specification for Seamless and Welded Austenitic Stainless Steel Pipes

SA-312 TP309H 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 | - |

| SA-312 TP309H 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 | - |

| SA-312 TP309H Heat Treatment Regime | | | | |
|-------------------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| SA-312 TP309H 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: