

This page is mainly introduced the STS304N1 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STS304N1, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Special Alloy STS304N1

### STS304N1 Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--------------|
|------|-----------------|--------------|

### STS304N1 Chemical composition (mass fraction) (wt.%)

| Chemical |           |          | Min.(%)   |          |           |           | Max.(%) |    |              |  |
|----------|-----------|----------|-----------|----------|-----------|-----------|---------|----|--------------|--|
| C        | Si        | Mn       | P         | S        | Cr        | Ni        | Mo      | V  | Ta           |  |
| Max 0.08 | Max 1.00  | Max 2.50 | Max 0.045 | Max 0.03 | 18.0-20.0 | 7.00-10.5 |         |    |              |  |
| W        | N         | Cu       | Co        | Pb       | B         | Nb        | Al      | Ti | Other        |  |
|          | 0.10-0.25 |          |           |          |           |           |         |    | Se: max 0.15 |  |

KS standard austenite stainless steel bars (KS D3706-1992)

### STS304N1 Physical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength   | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 65      | $\delta_{5\geq}$ (%)     |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | Akv $\geq$ /J            |
| HBS              | 123-321 | -                        |
| HRC              | 30      | -                        |

### STS304N1 Mechanical Properties

|                  |         |                 |
|------------------|---------|-----------------|
| Tensile strength | 231-231 | $\sigma_b$ /MPa |
|                  |         |                 |

|                |         |                                  |
|----------------|---------|----------------------------------|
| Yield Strength | 154     | $\sigma_{0.2} \geq / \text{MPa}$ |
| Elongation     | 56      | $\delta 5 \geq (\%)$             |
| $\psi$         | -       | $\psi \geq (\%)$                 |
| Akv            | -       | $Akv \geq / \text{J}$            |
| HBS            | 235-268 | -                                |
| HRC            | 30      | -                                |

### STS304N1 Heat Treatment Regime

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

### STS304N1 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          | $\Phi 8$ -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 Special Alloy the specifications follows:**