

This page is mainly introduced the A 409 S32100 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of A 409 S32100, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Data Table for Grades Stainless Steels A 409 S32100

### A 409 S32100 Standard Number:

| ITEM | Standard Number     | Descriptions                                                                          |
|------|---------------------|---------------------------------------------------------------------------------------|
| 1    | A 409/A 409M (2009) | Welded Large Diameter Austenitic Steel Pipe for Corrosive or High-Temperature Service |

### A 409 S32100 Chemical composition(mass fraction)(wt.%)

| Chemical | Min.(%) | Max.(%) |
|----------|---------|---------|
| C        |         | 0.08    |
| Mn       |         | 2.00    |
| Si       |         | 1.00    |
| P        |         | 0.045   |
| S        |         | 0.03    |
| Cr       | 17.00   | 19.00   |
| Ni       | 9.00    | 12.00   |
| N        |         | 0.10    |

### A 409 S32100 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      | -                        |

### A 409 S32100 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      | -                              |

### A 409 S32100 Heat Treatment Regime

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

### A 409 S32100 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          | Φ8-1200mm*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 Stainless Steels the specifications follows:**