

This page is mainly introduced the S32304 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of S32304, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Special Steel S32304

### S32304 Standard Number:

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

### S32304 Chemical composition (mass fraction) (wt.%)

| Chemical | Min.(%) |    | Max.(%) |    |    |    |    |    |       |
|----------|---------|----|---------|----|----|----|----|----|-------|
| C        |         |    | 0.03    |    |    |    |    |    |       |
| Mn       |         |    | 2.50    |    |    |    |    |    |       |
| Si       |         |    | 1.00    |    |    |    |    |    |       |
| P        |         |    | 0.04    |    |    |    |    |    |       |
| S        |         |    | 0.03    |    |    |    |    |    |       |
| Cr       | 21.50   |    | 24.50   |    |    |    |    |    |       |
| Ni       | 3.00    |    | 5.50    |    |    |    |    |    |       |
| Mo       | 0.05    |    | 0.60    |    |    |    |    |    |       |
| N        | 0.05    |    | 0.20    |    |    |    |    |    |       |
| Cu       | 0.05    |    | 3.00    |    |    |    |    |    |       |
| C        | Si      | Mn | P       | S  | Cr | Ni | Mo | V  | Ta    |
| W        | N       | Cu | Co      | Pb | B  | Nb | Al | Ti | Other |

Duplex (Austenitic-Ferritic) Chromium Nickel Nitrogen Stainless Steel

### S32304 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      | -                        |

### S32304 Mechanical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength   | 154     | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 56      | $\delta 5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | Akv $\geq$ /J            |
| HBS              | 235-268 | -                        |
| HRC              | 30      | -                        |

### S32304 Heat Treatment Regime

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

### S32304 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 Specialsteel the specifications follows:**