

This page is mainly introduced the **AISI 651 Datasheet**, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of **AISI 651**, 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 AISI 651

AISI 651 Standard Number:

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

AISI 651 Chemical composition (mass fraction) (wt.%)

| Chemical | | | Min.(%) | | | | Max.(%) | | |
|----------|------|------|---------|----|------|----|---------|------|-----------|
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| 0.32 | 0.55 | 1.15 | | | 18.5 | 9 | 1.4 | | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| 1.35 | | | | | | | | 0.25 | Nb/Ta 0.4 |

AISI 651 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 | - |

AISI 651 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 | - |

AISI 651 Heat Treatment Regime

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

AISI 651 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 Special Steel the specifications follows: