

This page is mainly introduced the 12023 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 12023,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Datasheet for Steel Grades Structure Steel 12023

12023 Standard Number:

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

12023 Chemical composition(mass fraction)(wt.%)

| Chemical | | | Min.(%) | | | | Max.(%) | | |
|-----------|-----------|-----------|---------|------|------|------|---------|----|-------|
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| 0.12-0.19 | 0.15-0.40 | 0.35-0.65 | 0.04 | 0.04 | 0.25 | 0.30 | | | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | 0.3 | | | | | | | |

12023

12023 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 | - |

12023 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 | - |

12023 Heat Treatment Regime

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

12023 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 Structure Steel the specifications follows: