

This page is mainly introduced the ISO 20A Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of ISO 20A, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel ISO 20A

| ISO 20A Standard Number: | | |
|--------------------------|---------------------|--|
| ITEM | Standard Number | Descriptions |
| 1 | ISO 15510 (2010) | Stainless steels -- Chemical composition |
| 2 | ISO 16143-1 (2004) | Stainless steels for general purposes -- Part 1: Flat products |
| 3 | ISO 16143-2 (2004) | Stainless steels for general purposes -- Part 2: Semi-finished products, bars, rods and sections |
| 4 | ISO 16143-3 (2005) | Stainless steels for general purposes -- Part 3: Wire |
| 5 | ISO 6931-1 (1994) | Stainless steels for springs - Part 1: Wire |
| 6 | ISO 6931-2 (2005) | Stainless steels for springs - Part 2: Narrow strip |
| 7 | ISO 9328-7 (2011) | Steel flat products for pressure purposes - Technical delivery conditions - Part 7: Stainless steels |
| 8 | ISO/TS 15510 (2003) | Stainless steels - Chemical composition |

| ISO 20A Chemical composition(mass fraction)(wt.%) | | | | | | | | | |
|---|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | | | | | 0.07 | | | |
| Si | | | | | | 1.00 | | | |
| Mn | | | | | | 2.00 | | | |
| P | | | | | | 0.045 | | | |
| S | | | | | | 0.030 | | | |
| Cr | | 16.50 | | | | 18.50 | | | |
| Ni | | 10.50 | | | | 13.00 | | | |
| Mo | | 2.50 | | | | 3.00 | | | |
| N | | | | | | 0.11 | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Stainless steels - Chemical composition

ISO 20A 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 | - |

ISO 20A 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 | - |

ISO 20A Heat Treatment Regime

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

ISO 20A 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, | $\Phi 8$ -1200mm*L | Forging, hot rolling and | Black, Rough Turning, |

| | | | | |
|---------------|--|----------------------------|-----------------------------------|---|
| | Square Bar | | cold rolling, Cast | 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: