

This page is mainly introduced the 10CrMo9-10 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 10CrMo9-10, 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 10CrMo9-10

| 10CrMo9-10 Standard Number: | | |
|-----------------------------|------------------|---|
| ITEM | Standard Number | Descriptions |
| 1 | EN 10028-2: 2009 | Flat products made of steels for pressure purposes. Non-alloy and alloy steels with specified elevated temperature properties |
| 2 | EN 10216-2: 2014 | Seamless steel tubes for pressure purposes. Technical delivery conditions. Non-alloy and alloy steel tubes with specified elevated temperature properties |
| 3 | EN 10253-2: 2007 | Butt-welding pipe fittings. Non alloy and ferritic alloy steels with specific inspection requirements |
| 4 | EN 10273: 2007 | Hot rolled weldable steel bars for pressure purposes with specified elevated temperature properties |

| 10CrMo9-10 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | 0.08 | | | | 0.14 | | | |
| Si | | | | | | 0.5 | | | |
| Mn | | 0.4 | | | | 0.8 | | | |
| P | | | | | | 0.020 | | | |
| S | | | | | | 0.010 | | | |
| Cr | | 2.00 | | | | 2.50 | | | |
| Mo | | 0.90 | | | | 1.10 | | | |
| N | | | | | | 0.012 | | | |
| Cu | | | | | | 0.3 | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

10CrMo9-10

10CrMo9-10 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 | - |

10CrMo9-10 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 | - |

10CrMo9-10 Heat Treatment Regime

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

10CrMo9-10 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 |

