

This page is mainly introduced the X39Cr13 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X39Cr13, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel X39Cr13

X39Cr13 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 6931-2 | Stainless steels for springs - Part 2: Narrow strip |
| 4 | ISO/TS 15510 (2003) | Stainless steels - Chemical composition |

X39Cr13 Chemical composition (mass fraction) (wt.%)

| Chemical | Min.(%) | | Max.(%) | | | | | | |
|----------|---------|----|---------|----|----|----|----|----|-------|
| C | 0.36 | | 0.42 | | | | | | |
| Si | | | 1.00 | | | | | | |
| Mn | | | 1.50 | | | | | | |
| P | | | 0.040 | | | | | | |
| S | | | 0.030 | | | | | | |
| Cr | 12.50 | | 14.50 | | | | | | |
| Ni | | | | | | | | | |
| Mo | | | | | | | | | |
| N | | | | | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Stainless steels - Chemical composition

X39Cr13 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 | - |

X39Cr13 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 | - |

X39Cr13 Heat Treatment Regime

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

X39Cr13 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, | Φ8-1200mm*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: