

This page is mainly introduced the SWRCH12A Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SWRCH12A, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Carbon Steel SWRCH12A

| SWRCH12A Standard Number: | | |
|---------------------------|-----------------|--------------|
| ITEM | Standard Number | Descriptions |

| SWRCH12A Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|----|---------|----|----|----|---------|----|-------|
| Chemical | | | Min.(%) | | | | Max.(%) | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| | | | | | | | | | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

| | | | | | | |
|----------|-------|---------|------|-------|------|------|
| C | Si | Mn | P | S | Cr | Ni |
| 0.1-0.15 | 0.1 | 0.3-0.6 | 0.03 | 0.035 | ≤0.2 | ≤0.2 |
| Mo | Al | Cu | Nb | Ti | V | Ce |
| | ≥0.02 | ≤0.3 | | | | |
| N | Co | Pb | B | Other | | |
| | | | | | | |
| | | | | | | |

SWRCH12A 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 | - |

SWRCH12A 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 | - |

SWRCH12A Heat Treatment Regime

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

| | | | | |
|---|---|---|---|---|
| √ | √ | √ | √ | √ |
|---|---|---|---|---|

| SWRCH12A 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 Carbon Steel the specifications follows: