

This page is mainly introduced the SWRCH20K Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SWRCH20K, 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 SWRCH20K

| SWRCH20K Standard Number: |                 |              |
|---------------------------|-----------------|--------------|
| ITEM                      | Standard Number | Descriptions |

| SWRCH20K Chemical composition (mass fraction) (wt.%) |           |           |       |           |    |    |         |    |       |
|--|-----------|-----------|-------|-----------|----|----|---------|----|-------|
| Chemical   |           |           |       | Min.(%)   |    |    | Max.(%) |    |       |
| C  | Si        | Mn        | P     | S         | Cr | Ni | Mo      | V  | Ta    |
| 0.18-0.23  | 0.10-0.35 | 0.30-0.60 | 0.030 | Max 0.035 |    |    |         |    |       |
| W  | N         | Cu        | Co    | Pb        | B  | Nb | Al      | Ti | Other |
|  |           |           |       |           |    |    | —       |    |       |

### SWRCH20K

| SWRCH20K Physical Properties |         |                          |
|------------------------------|---------|--------------------------|
| Tensile strength             | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength               | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation                   | 65      | $\delta_5 \geq$ (%)      |
| $\psi$                       | -       | $\psi \geq$ (%)          |
| Akv                          | -       | $Akv \geq$ /J            |
| HBS                          | 123-321 | -                        |
| HRC                          | 30      | -                        |

| SWRCH20K Mechanical Properties |         |                          |
|--------------------------------|---------|--------------------------|
| Tensile strength               | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength                 | 154     | $\sigma_{0.2} \geq$ /MPa |

|            |         |                      |
|------------|---------|----------------------|
| Elongation | 56      | $\delta 5 \geq (\%)$ |
| $\psi$     | -       | $\psi \geq (\%)$     |
| Akv        | -       | $Akv \geq J$         |
| HBS        | 235-268 | -                    |
| HRC        | 30      | -                    |

### SWRCH20K Heat Treatment Regime

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

### SWRCH20K 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 Structure Steel the specifications follows:**