

**This page is mainly introduced the 349S54 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 349S54, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel 349S54

| 349S54 Standard Number: |                 |   |
|-------------------------|-----------------|---|
| ITEM                    | Standard Number | Descriptions  |
| 1                       | BS 970-4        | Specification for wrought steels for mechanical and allied engineering purposes. Valve steels |

| 349S54 Chemical composition(mass fraction)(wt.%) |    |         |    |    |         |    |    |    |       |
|--|----|---------|----|----|---------|----|----|----|-------|
| Chemical   |    | Min.(%) |    |    | Max.(%) |    |    |    |       |
| C  |    | 0.48    |    |    | 0.58    |    |    |    |       |
| Si   |    |         |    |    | 0.25    |    |    |    |       |
| Mn   |    | 8.00    |    |    | 10.00   |    |    |    |       |
| P  |    |         |    |    | 0.040   |    |    |    |       |
| S  |    | 0.035   |    |    | 0.080   |    |    |    |       |
| Cr   |    | 20.00   |    |    | 22.00   |    |    |    |       |
| Ni   |    | 3.25    |    |    | 4.50    |    |    |    |       |
| Mo   |    |         |    |    |         |    |    |    |       |
| N  |    | 0.38    |    |    | 0.50    |    |    |    |       |
| C+N  |    | 0.90    |    |    |         |    |    |    |       |
| C  | Si | Mn      | P  | S  | Cr      | Ni | Mo | V  | Ta    |
| W  | N  | Cu      | Co | Pb | B       | Nb | Al | Ti | Other |
|  |    |         |    |    |         |    |    |    |       |

Specification for wrought steels for mechanical and allied engineering purposes. Valve steels

### 349S54 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      | -                        |

### 349S54 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      | -                        |

### 349S54 Heat Treatment Regime

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

### 349S54 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:**