

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

### Nichrome I Standard Number:

| ITEM | Standard Number  | Descriptions                             |
|------|------------------|--|
| 1    | SAE J 470 (1976) | Wrought nickel and nickel-related alloys |

### Nichrome I Chemical composition (mass fraction) (wt.%)

| Chemical | Min.(%) |    |    |    |    | Max.(%)   |    |    |       |  |
|----------|---------|----|----|----|----|-----------|----|----|-------|--|
| C        |         |    |    |    |    | 0.15      |    |    |       |  |
| Si       | 0.75    |    |    |    |    | 1.60      |    |    |       |  |
| Mn       |         |    |    |    |    | 1.00      |    |    |       |  |
| Cr       | 14.00   |    |    |    |    | 18.00     |    |    |       |  |
| Ni       |         |    |    |    |    | 57.00     |    |    |       |  |
| Mo       |         |    |    |    |    |           |    |    |       |  |
| Co       |         |    |    |    |    |           |    |    |       |  |
| W        |         |    |    |    |    |           |    |    |       |  |
| Al       |         |    |    |    |    |           |    |    |       |  |
| Cu       |         |    |    |    |    |           |    |    |       |  |
| Ti       |         |    |    |    |    |           |    |    |       |  |
| Fe       |         |    |    |    |    | remaining |    |    |       |  |
| C        | Si      | Mn | P  | S  | Cr | Ni        | Mo | V  | Ta    |  |
| W        | N       | Cu | Co | Pb | B  | Nb        | Al | Ti | Other |  |
|          |         |    |    |    |    |           |    |    |       |  |

Wrought nickel and nickel-related alloys

### Nichrome I 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      | -                        |

### Nichrome I 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      | -                        |

### Nichrome I Heat Treatment Regime

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

### Nichrome I 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:**