

This page is mainly introduced the Rene 41 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Rene 41, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel Rene 41

| Rene 41 Standard Number: | | |
|--------------------------|----------------------|--|
| ITEM | Standard Number | Descriptions |
| 1 | SAE AMS 5713J (2007) | Nickel Alloy, Corrosion and Heat-Resistant, Bars, Forgings, and Rings 53Ni - 19Cr - 11Co - 9.8Mo - 3.2Ti - 1.6Al - 0.006B Vacuum Melted, Solution and Precipitation Heat Treated |

| Rene 41 Chemical composition(mass fraction)(wt.%) | | | | | | | | | |
|---|----|---------|----|----|----|-----------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | | | | | 0.09 | | | |
| Si | | | | | | 0.25 | | | |
| Mn | | | | | | 0.25 | | | |
| Cr | | | | | | 19.00 | | | |
| Ni | | | | | | remaining | | | |
| Mo | | | | | | 10.00 | | | |
| Co | | | | | | 11.00 | | | |
| W | | | | | | | | | |
| Al | | | | | | 1.50 | | | |
| Cu | | | | | | | | | |
| Ti | | | | | | 3.10 | | | |
| Fe | | | | | | 1.80 | | | |
| B | | | | | | 0.005 | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Nickel Alloy, Corrosion and Heat-Resistant, Bars, Forgings, and Rings 53Ni - 19Cr - 11Co - 9.8Mo -

3.2Ti - 1.6Al - 0.006B Vacuum Melted, Solution and Precipitation Heat Treated

Rene 41 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 | - |

Rene 41 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 | - |

Rene 41 Heat Treatment Regime

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

| Rene 41 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 Specialsteel the specifications follows: