

This page is mainly introduced the Rp9 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Rp9, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Data Table for Grades Special Alloy Rp9

| Rp9 Standard Number: |                 |              |
|----------------------|-----------------|--------------|
| ITEM                 | Standard Number | Descriptions |

| Rp9 Chemical composition(mass fraction)(wt.%) |         |         |
|-----------------------------------------------|---------|---------|
| Chemical                                      | Min.(%) | Max.(%) |

| Rp9 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      | -                        |

| Rp9 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      | -                        |

| Rp9 Heat Treatment Regime |           |           |             |       |
|---------------------------|-----------|-----------|-------------|-------|
| Annealing                 | Quenching | Tempering | Normalizing | Q & T |
| √                         | √         | √         | √           | √     |

### Rp9 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 Special Alloy the specifications follows:**