

This page is mainly introduced the A 1031 Grade 8735 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of A 1031 Grade 8735, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel A 1031 Grade 8735

### A 1031 Grade 8735 Standard Number:

| ITEM | Standard Number      | Descriptions   |
|------|----------------------|--|
| 1    | A 1031/A1031M (2012) | Steel, Sheet and Strip, Heavy-Thickness Coils, Alloy, Drawing Steel and Structural Steel, Hot-Rolled |

### A 1031 Grade 8735 Chemical composition (mass fraction) (wt.%)

| Chemical | Min.(%) |    |    |    |    | Max.(%) |    |    |       |  |
|----------|---------|----|----|----|----|---------|----|----|-------|--|
| C        |         |    |    |    |    | 0.08    |    |    |       |  |
| Si       |         |    |    |    |    | 1.00    |    |    |       |  |
| Mn       |         |    |    |    |    | 2.00    |    |    |       |  |
| P        |         |    |    |    |    | 0.045   |    |    |       |  |
| S        |         |    |    |    |    | 0.03    |    |    |       |  |
| Ni       | 13.00   |    |    |    |    | 15.00   |    |    |       |  |
| Cr       | 17.00   |    |    |    |    | 19.00   |    |    |       |  |
| Al       |         |    |    |    |    |         |    |    |       |  |
| Cu       |         |    |    |    |    |         |    |    |       |  |
| Ti       |         |    |    |    |    |         |    |    |       |  |
| Fe       |         |    |    |    |    |         |    |    |       |  |
| N        |         |    |    |    |    |         |    |    |       |  |
| Mo       | 1.75    |    |    |    |    | 2.75    |    |    |       |  |
| V        |         |    |    |    |    |         |    |    |       |  |
| C        | Si      | Mn | P  | S  | Cr | Ni      | Mo | V  | Ta    |  |
| W        | N       | Cu | Co | Pb | B  | Nb      | Al | Ti | Other |  |
|          |         |    |    |    |    |         |    |    |       |  |

Steel, Sheet and Strip, Heavy-Thickness Coils, Alloy, Drawing Steel and Structural Steel, Hot-

Rolled

### A 1031 Grade 8735 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      | -                        |

### A 1031 Grade 8735 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      | -                        |

### A 1031 Grade 8735 Heat Treatment Regime

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

| A 1031 Grade 8735 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:**