

**This page is mainly introduced the 201 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 201, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel 201

| 201 Standard Number: |                     |  |
|----------------------|---------------------|--|
| ITEM                 | Standard Number     | Descriptions   |
| 1                    | A 213/A 213M (2011) | Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes                             |
| 2                    | A 240/A 240M (2012) | Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications |
| 3                    | A 249/A 249M (2010) | Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes                                       |
| 4                    | A 276 (2010)        | Stainless Steel Bars and Shapes  |
| 5                    | A 473 (2009)        | Stainless Steel Forgings   |
| 6                    | A 666 (2010)        | Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar                                   |
| 7                    | A 959 (2011)        | Standard Guide for Specifying Harmonized Standard Grade Compositions for Wrought Stainless Steels                      |
| 8                    | SAE J 405 (1998)    | Chemical compositions of SAE wrought stainless steels  |

| 201 Chemical composition(mass fraction)(wt.%) |    |         |    |    |    |         |    |    |       |
|---|----|---------|----|----|----|---------|----|----|-------|
| Chemical                                      |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
| C   |    |         |    |    |    | 0.15    |    |    |       |
| Si  |    |         |    |    |    | 1.00    |    |    |       |
| Mn  |    | 5.05    |    |    |    | 7.50    |    |    |       |
| P   |    |         |    |    |    | 0.06    |    |    |       |
| S   |    |         |    |    |    | 0.03    |    |    |       |
| Cr  |    | 16.0    |    |    |    | 18.0    |    |    |       |
| Ni  |    | 3.50    |    |    |    | 5.50    |    |    |       |
| N   |    |         |    |    |    | 0.25    |    |    |       |
| C   | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W   | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |
|   |    |         |    |    |    |         |    |    |       |

## AISI 201

| 201 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      | -                        |

| 201 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      | -                        |

| 201 Heat Treatment Regime |           |           |             |       |
|---------------------------|-----------|-----------|-------------|-------|
| Annealing                 | Quenching | Tempering | Normalizing | Q & T |
| √                         | √         | √         | √           | √     |

| 201 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 |

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|               |   |                               |                                      |   |
|---------------|---|-------------------------------|--------------------------------------|---|
| Pipes / Tubes | Seamless Pipes/Tubes,<br>Welded Pipes/Tubes | OD:6-219mm x<br>WT:0.5-20.0mm | Hot extrusion, Cold<br>Drawn, Welded | Annealed, Solution and<br>Aging, Q+T, ACID-<br>WASHED |
|---------------|---|-------------------------------|--------------------------------------|---|

**We can produce Specialsteel the specifications follows:**