## Technical Datasheet AWS 131 Rev.2





# **STAINLESS STEEL** 1.4310

#### **Key Features**

Good mechanical properties and corrosion resistance Capable of high tensile strength following cold work

IMPORTANT We will manufacture to your required mechanical properties.

## key advantages to you, our customer



0.025mm to 21mm (.001" to .827")





E.M.S available

(10 ft to 6000 Lbs)





Technical support

### STAINLESS STEEL 1.4310 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

Packaging Coils Spools Bars or lengths

Manufacturing quality, delivering reliability | alloywire.com

## **STAINLESS STEEL 1.4310**



| Chemical Composition |        |       | Specifications        | Key Features                               | Typical Applications      |
|----------------------|--------|-------|-----------------------|--|---------------------------|
| Element              | Min %  | Max % | BS EN 10088-3         | Good mechanical properties and corrosion   | Springs and high strength |
| С                    | 0.05   | 0.12  | DIN EN 10270-3        | resistance                                 | components                |
| Mn                   | -      | 2.00  |                       | Capable of high tensile strength following | Engineered components     |
|                      |        |       |                       | cold work                                  | Chemical processing       |
| Р                    | -      | 0.045 |                       | Magnetic following cold work               | Electronic equipment      |
| S                    | -      | 0.015 | Designations          | ·····g·······g·····                        |                           |
| Si                   | -      | 2.00  | W.Nr. 1.4310          |  |                           |
| Cr                   | 16.00  | 19.00 | UNS S30100<br>AWS 131 |  |                           |
| Ni                   | 6.00   | 9.50  |                       |  |                           |
| N                    | -      | 0.11  |                       |  |                           |
| Мо                   | -      | 0.80  |                       |  |                           |
| Fe                   | Fe BAL |       |                       |  |                           |

| Density                  | 7.90 g/cm <sup>3</sup>    | 0.285 lb/in <sup>3</sup>                      |  |
|--------------------------|---------------------------|---|--|
| Melting Point            | 1420 °C                   | 2590 °F                                       |  |
| Coefficient of Expansion | 17.6 μm/m °C (20 – 100°C) | 9.8 x 10 <sup>-6</sup> in/in °F (70 – 212 °F) |  |
| Modulus of Rigidity      | 76 kN/mm <sup>2</sup>     | 11000 ksi                                     |  |
| Modulus of Elasticity    | 190 kN/mm²                | 28000 ksi                                     |  |

| Heat Treatment of Finished Parts    |                |             |           |           |         |  |  |
|-------------------------------------|----------------|-------------|-----------|-----------|---------|--|--|
| Condition of sumplied by Alloy Wire | Туре           | Temperature |           |           | Cooling |  |  |
| Condition as supplied by Alloy Wire |                | °C          | °F        | Time (Hr) | Cooling |  |  |
| Annealed or Spring Temper           | Stress Relieve | 250 - 400   | 480 - 750 | 1         | Air     |  |  |

| Properties    |                       |         |                               |              |  |  |  |
|---------------|-----------------------|---------|-------------------------------|--------------|--|--|--|
| Condition     | Approx. tensile stren | gth     | Approx. operating temperature |              |  |  |  |
| Condition     | N/mm²                 | ksi     | °C                            | °F           |  |  |  |
| Annealed      | <800                  | <116    | -200 to +300                  | -330 to +570 |  |  |  |
| Spring Temper | 1600 – 2200           | 232-319 | -200 to +300                  | -330 to +570 |  |  |  |

The above tensile strength ranges are typical. If you require different please ask.

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AS 9100 Aerospace & Defence ISO 9001 Quality Management ISO 45001 Health & Safety