

# 1.4835

|                    | %C   | %Si  | %Mn  | %P    | %S    | %Cr  | %Ni   | %N   | %Ce  |
|--------------------|------|------|------|-------|-------|------|-------|------|------|
| X9CrNiSiNCe21-11-2 | 0.05 | 1.40 | -    | -     | -     | 20.0 | 10.00 | 0.12 | 0.03 |
|                    | 0.12 | 2.50 | 1.00 | 0.045 | 0.015 | 22.0 | 12.00 | 0.20 | 0.08 |

## STEEL PROPERTIES

The steel grade 1.4835 (also called UNS S30815 and SS2368) is an austenitic stainless warmth steel with good resistance to oxidation. The steel has been designed to be used at temperatures over 550°C, the foremost suitable temperature range is 850-1100°C. The steel suits for production of details with good resistance to temperature corrosion and comparatively high strength at elevated temperatures. It also has good creep strength properties. 1.4835 isn't magnetic but are often slightly magnetic after cold working or welding

## EQUIVALENT GRADES

|          |        |                    |
|----------|--------|--------------------|
| EN 10095 | 1.4835 | X9CrNiSiNCe21-11-2 |
| AISI     | 253MA  |                    |
| AFNOR    | -      |                    |
| BS       | -      |                    |
| JIS      | -      |                    |
| UNS      | S30815 |                    |

## APPLICATIONS

Typical application areas for 1.4835:

- Ovens
- Construction
- Building
- As details at high temperature

## HEAT TREATMENT

Solution annealing.

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**Mechanical properties at room temperature for 1.4835 as per EN 10095 in the usual delivery condition**

| Flat products with thickness <i>a</i> | Heat Treatment Condition | Hardness HB max. | 0.2% Proof strength MPa. min. | Tensile Strength R <sub>m</sub> MPa. | A % Min. Long Products |
|---------------------------------------|--------------------------|------------------|-------------------------------|--------------------------------------|------------------------|
| <75                                   | +AT                      | 210              | 310                           | 650-850                              | 40                     |

**Physical properties of 1.4835 as per EN 10088-1**

| Density Kg/dm <sup>3</sup> | Linear Expansion Coefficient 10 <sup>-6</sup> k <sup>-1</sup> Between 20°C and (°C) |       |       |       |        | Thermal conductivity W (m.K) |       | Specific Heat capacity kJ(kg.K) | Electrical resistivity Ωmm <sup>2</sup> /m At 20°C | Magnetizability |
|----------------------------|---|-------|-------|-------|--------|------------------------------|-------|---------------------------------|--|-----------------|
|                            | 200°C   | 400°C | 600°C | 800°C | 1000°C | 20°C                         | 500°C |                                 |  |                 |
| 7.8                        | 17.0  | 18.0  | 18.5  | 19.0  | 19.5   | 15                           | -     | 0.50                            | 0.85   | No              |