

1.4112 (X90CrMoV18)

Material Designation

1.4112 DIN

Standards

DIN EN 10088-3

Chemical Composition Mass-%

| | C | Si | Mn | P | S | Cr | Mo | V |
|------|------|------|------|------|------|-------|------|------|
| min. | 0,85 | - | - | - | - | 17,00 | 0,90 | 0,07 |
| max. | 0,95 | 1,00 | 1,00 | 0,04 | 0,03 | 19,00 | 1,30 | 0,12 |

Customer specific restrictions upon request

Properties

1.4112 is a hardenable, stainless martensitic steel with high wear and corrosion resistance. The grade is similar to S44003 Type 440B acc. to ASTM.

The ESR-variant fulfils highest requirements towards homogeneity and offers superior mechanical properties and service life.

Delivery Condition

✂ annealed (+A) max. 265 HBW

Application Area

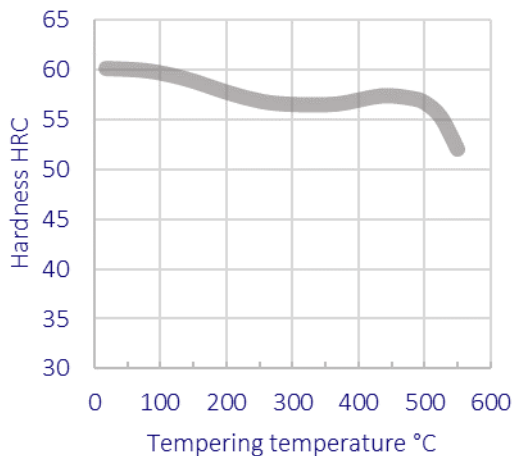
High demands on wear and corrosion resistance.

Typical Applications

- ✂ Surgical instruments
- ✂ Cutting tools
- ✂ Chemical and petrochemical industry
- ✂ Food industry
- ✂ Fuel injection

Heat Treatment Guideline Values

| | Temperature [°C] | Cooling medium |
|-------------------------------|-------------------------|----------------|
| Annealing (+A) | 800 - 880 | Furnace, air |
| Stress relieving (+SR) | 620 - 680, min. 2h | Furnace |
| Quenching and tempering (+QT) | 1000 - 1050 (Hardening) | Oil |
| | 180 - 500 (Tempering) | Air |



Tempering graph, hardening temperature 1025 °C, oil

Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNV ...
- Customer specific approval certificates

Innovation

- Fully automated ultrasonic testing up to dia. 1000 mm
- CO₂-reduction by innovative heat treatment solutions

Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

Your personal contact:

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