



SPECIFICATIONS

European Standards:

- 31CrMo12, 32CrMo12

Numerical designation: 1.8515, 1.7361

AIR : 30 CD 12

WL : 1.8564

TYPICAL MECHANICAL PROPERTIES

- Annealed condition: heat to 825°C followed by slow cooling.

- Brinell Hardness: 205

HEAT TREATMENT REFERENCE

- Oil quench from 900/925°C. Temper at 625°C

- UTS: 1000 N/mm²

- 0.2 % Yield strength: 850 N/mm²

- Elongation (5d): 18 %

- Impact strength KCU: 150 J/cm²

COMPOSITION

Carbon.....	0.30
Chromium.....	3.00
Molybdenum.....	0.40

APPLICATIONS

- Gears
- Spindles
- Machine tool components
- Various mechanical parts

CHARACTERISTICS

- Nitriding steel for surface hardness ~800 HV

HEAT TREATMENT

- Harden:
 - Heat to 900/925°C
 - Oil quench
- Temper:
 - Above 525°C
 - Depending on properties required
- Nitriding:
 - Surface hardness: approx. 850 Vickers

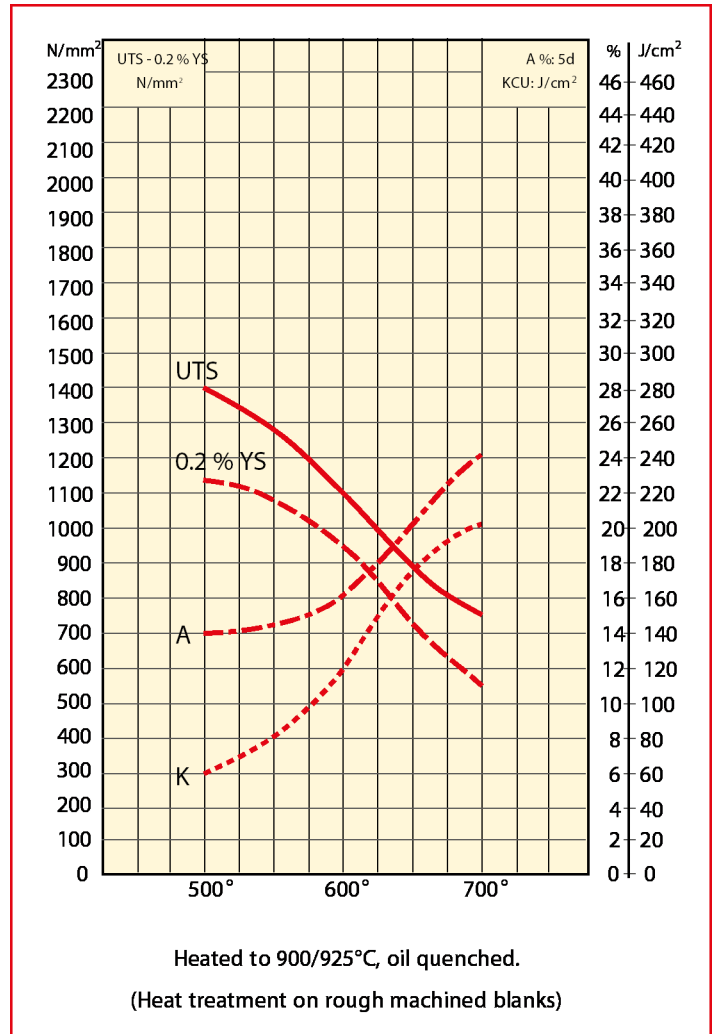
PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
 - between 20°C and 100°C: 11.3×10^{-6}
 - between 20°C and 500°C: 13.6×10^{-6}
- Critical points:
 - Ac 1: 780°C
 - Ac 3: 835°C

FORGING

- 1100/900°C

TEMPERING CURVE



Contact :

www.aubertduval.com

The data provided in this document represent typical or average values rather than maximum or minimum guaranteed values. The applications indicated for the grades described are given as guidance only in order to help the reader in his personal assessment. Please note that these do not constitute a guarantee whether implicit or explicit as to whether the grade selected is suited to specific requirements. Aubert & Duval's liability shall not under any circumstances extend to product selection or to the consequences of that selection.