



SPECIFICATIONS

European standards:

- 42CrMo4
- Numerical designation: 1.7225

MECCHANICAL PROPERTIES

- Annealed condition: heat to 825°C followed by slow cooling.
 - Brinell hardness: 217
- Oil quench from 840°C. Temper at 200°C.
 - UTS: 1900 N/mm²
 - 0.2 % Yield strength: 1500 N/mm²
 - Elongation (5d): 7 %
 - Impact strength KCU: 30 J/cm²
- Oil quench from 840°C. Temper at 675°C.
 - UTS: 1000 N/mm²
 - 0.2 % Yield strength: 800 N/mm²
 - Elongation (5d): 18 %
 - Impact strength KCU: 95 J/cm²

COMPOSITION

Carbon	0.42
Chromium	1.00
Molybdenum.....	0.20

APPPLICATIONS

- Shafts, gears and parts subject to mechanical wear.

CHARACTERISTICS

- Good resistance to wear.
- High level of hardenability.

HEAT TREATMENT

- Harden:
 - Heat to 840°C.
 - Oil quench.
- Temper:
 - Depending on properties required.

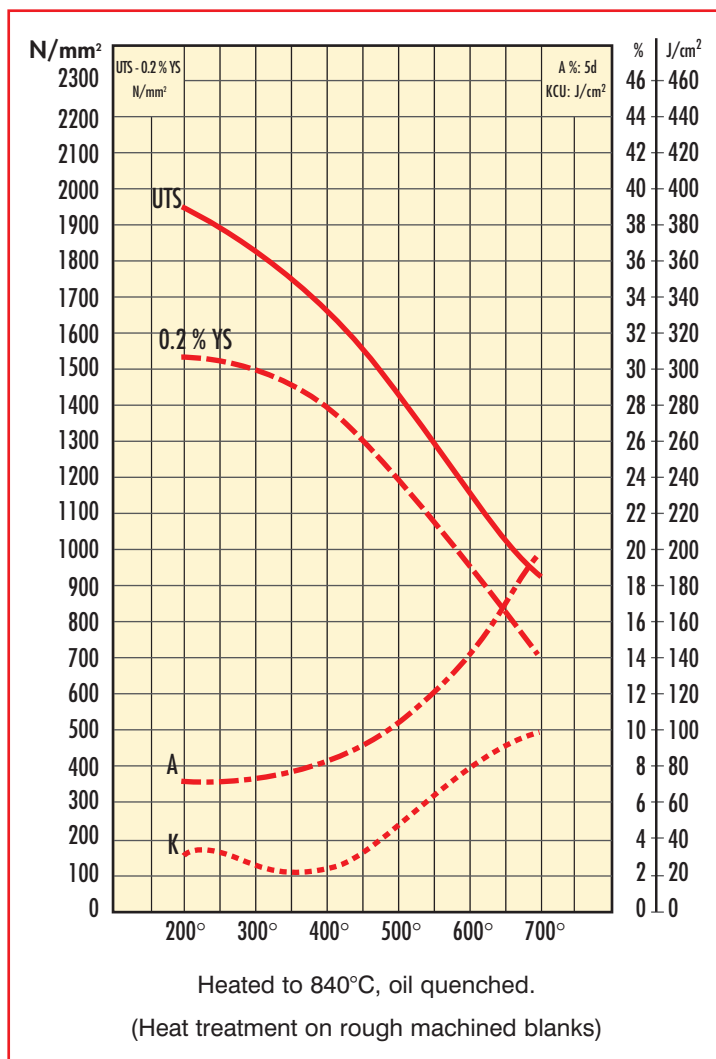
PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
 - between 20°C and 100°C: 11.6×10^{-6}
 - between 20°C and 700°C: 14.6×10^{-6}
- Critical points:
 - Ac 1: 740°C
 - Ac 3: 800°C

FORGING

- 1100/900°C

TEMPERING CURVE



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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.