

SPECIFICATIONS

European standard:

EN : 32CrMoV12-10*

AFNOR: 32CrMoV12-10*

W.Nr : 1.7765/~1.8522

DIN : 32CrMoV12-10

AMS : 6481

* Symbolic designation

PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
 - between 20°C and 100°C: 11.5×10^{-6}
 - between 20°C and 300°C: 12.6×10^{-6}
 - between 20°C and 500°C: 13.8×10^{-6}
- Critical points:
 - Ac 1: 800°C
 - Ac 3: 840°C

COMPOSITION

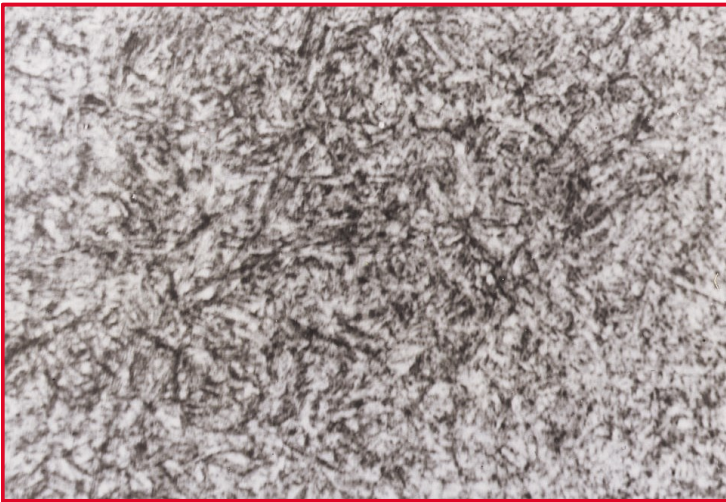
Carbon.....	0.35
Chromium.....	3.00
Moybdenum	1.00
Vanadium.....	0.25

APPLICATIONS

- Drop-stamp dies

CHARACTERISTICS

- Good toughness
- Good hardenability
- Excellent wear resistance in the nitrited layer



STRUCTURE IN THE ANNEALED CONDITION

According to process B2237

*Correct structure
(Mx500)*

MEK3 is generally delivered fully heat treated and ready for use with a Brinell hardness of approximately 380, i.e. equivalent to a UTS of 1300 N/mm²

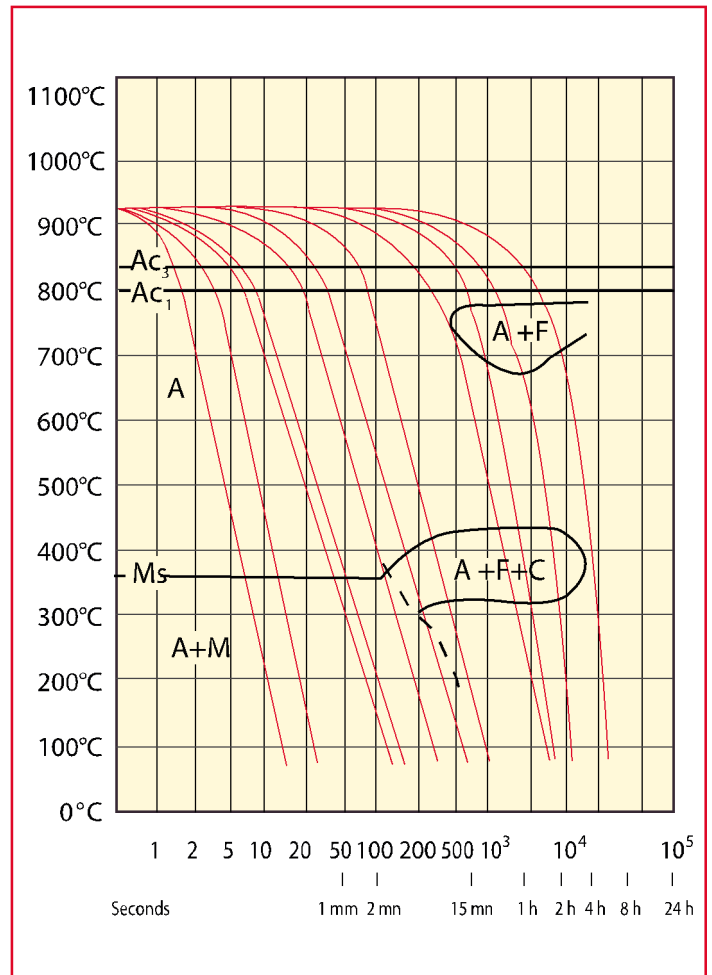
HEAT TREATMENT

For specific cases where the steel is delivered in the annealed condition.

- Harden:
 - Preheat to 750°C.
 - Raise to 920°C
 - Air cool or gas pressure quench

Oil quenching may be possible depending on the shape of the parts.

It is recommended that heating should take place in a neutral atmosphere.



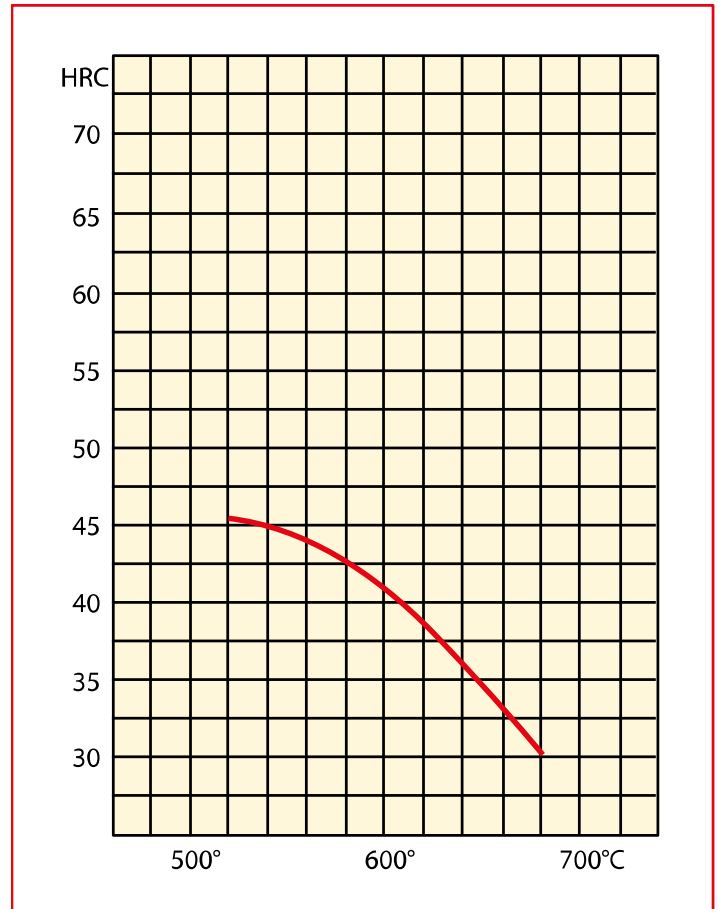
CCT DIAGRAM

Austenitizing at 920°C

TEMPERING CURVE

- Temper:
 - Above 525°C, according to hardness required

TEMPERING CURVE
1 cm thick test piece



SURFACE TREATMENT

- MEK3 is suitable for all nitriding processes. This treatment results in a hard surface layer providing improved resistance to erosion and wear. The hardness obtained after nitriding treatment is of the order of 800 Vickers.

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.