

SPECIFICATIONS

European standard:

EN	: 40NiCrMo16
AFNOR:	40NiCrMo16
W.Nr	: ~1.2766
DIN	: ~35NiCrMo16

PHYSICAL PROPERTIES

- Density: 7.9
- Mean coefficient of expansion in m/m.°C:
 - between 20°C and 200°C: 11.7×10^{-6}
 - between 20°C and 400°C: 12.5×10^{-6}
 - between 20°C and 600°C: 13.2×10^{-6}
- Critical points:
 - Ac 1: 670°C
 - Ac 3: 760°C

COMPOSITION

Carbon.....	0.37
Nickel.....	3.70
Chromium.....	1.80
Moybdenum	0.30

APPLICATIONS

- Die blocks
- Die holders
- Bolsters
- Drom stamp tups
- Cold heading dies

CHARACTERISTICS

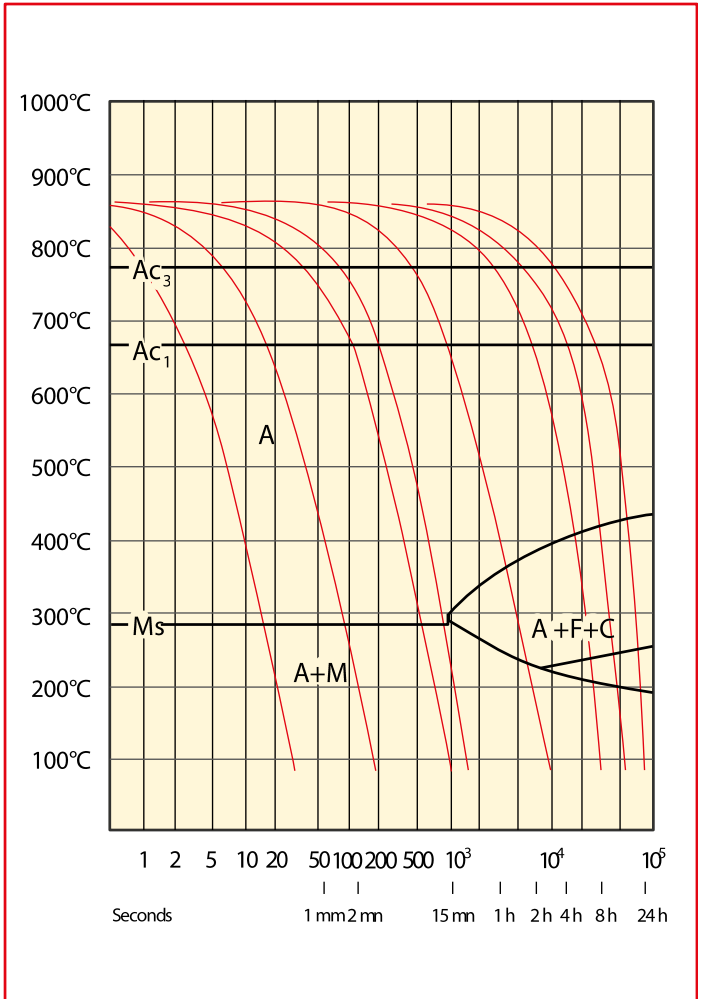
- High field stress and excellent impact strength
- Extremely low sensitivity to thermal shock
- Excellent hardenability

- Brinell hardness of approximately 269 in the softened condition.

HEAT TREATMENT

- Harden:
 - Preheat to 650°C.
 - Raise to 875°C
 - Air cool or gas pressure quench

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



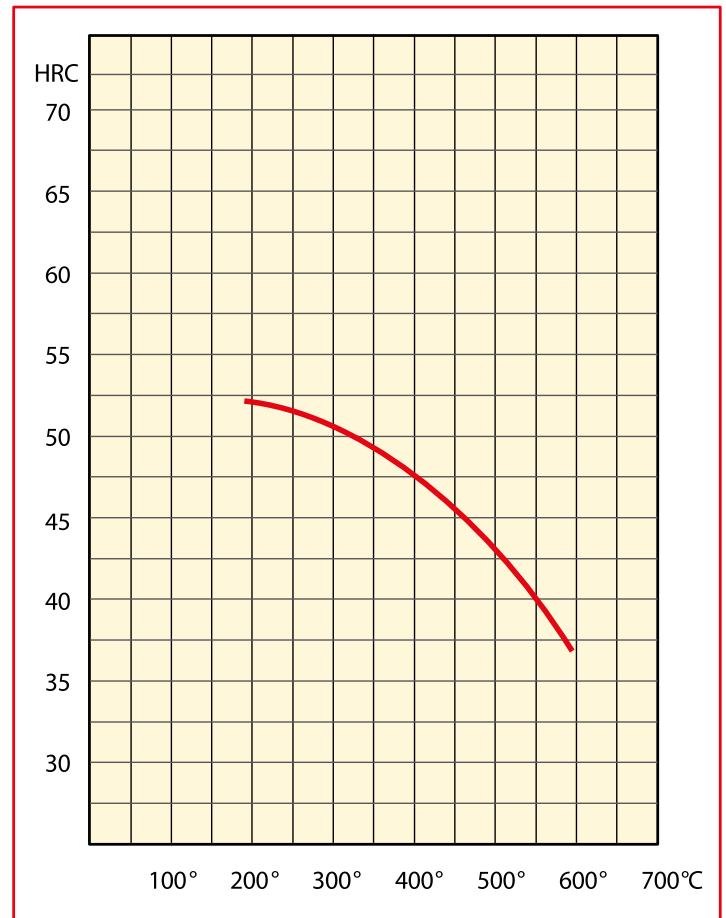
CCT DIAGRAM
Austenitizing at 875°C

HEAT TREATMENT

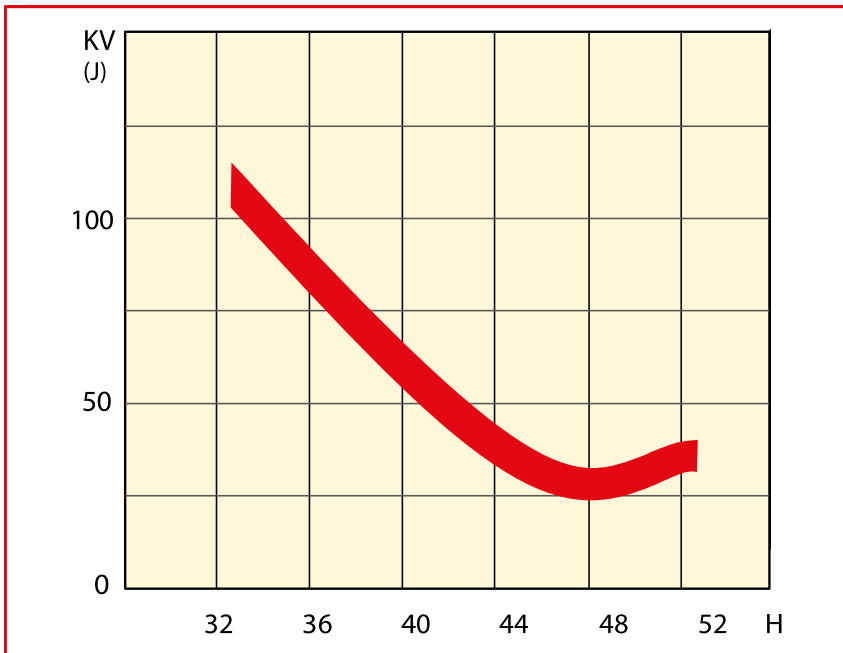
- Temper:
 - to obtain the maximum hardness:
temper at 550°C
 - for good toughness:
temper at 500°C minimum

TEMPERING CURVE
1 cm thick test piece

TEMPERING CURVE



MECHANICAL PROPERTIES



VARIATION OF IMPACT STRENGTH
WITH HARDNESS

FORGING

- 1100/900°C.

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.