

## SPECIFICATIONS

European standard:

EN : X40CrMoV5-1

AFNOR: X40CrMoV5-1

W.Nr : 1.2344

DIN : X40CrMoV5-1

AISI : H13 (NADCA # 207 - H13 Superior quality)

JIS : SKD61

## TYPICAL MECHANICAL PROPERTIES

- Softened condition,  
Hardness approximately 240 HB

## COMPOSITION

|                 |      |
|-----------------|------|
| Carbon.....     | 0.40 |
| Chromium.....   | 5.00 |
| Moybdenum ..... | 1.30 |
| Vanadium.....   | 1.00 |

## APPLICATIONS

- Dies for light alloy die casting

## CHARACTERISTICS

- High wear resistance
- Good thermal conductivity
- Suitable for polishing
- Suitable for all nitriding processes and surface coatings

## HEAT TREATMENT

- Harden:
  - Preheat to 750°C.
  - Raise to 1030°C
  - Air cool or gas pressure quench

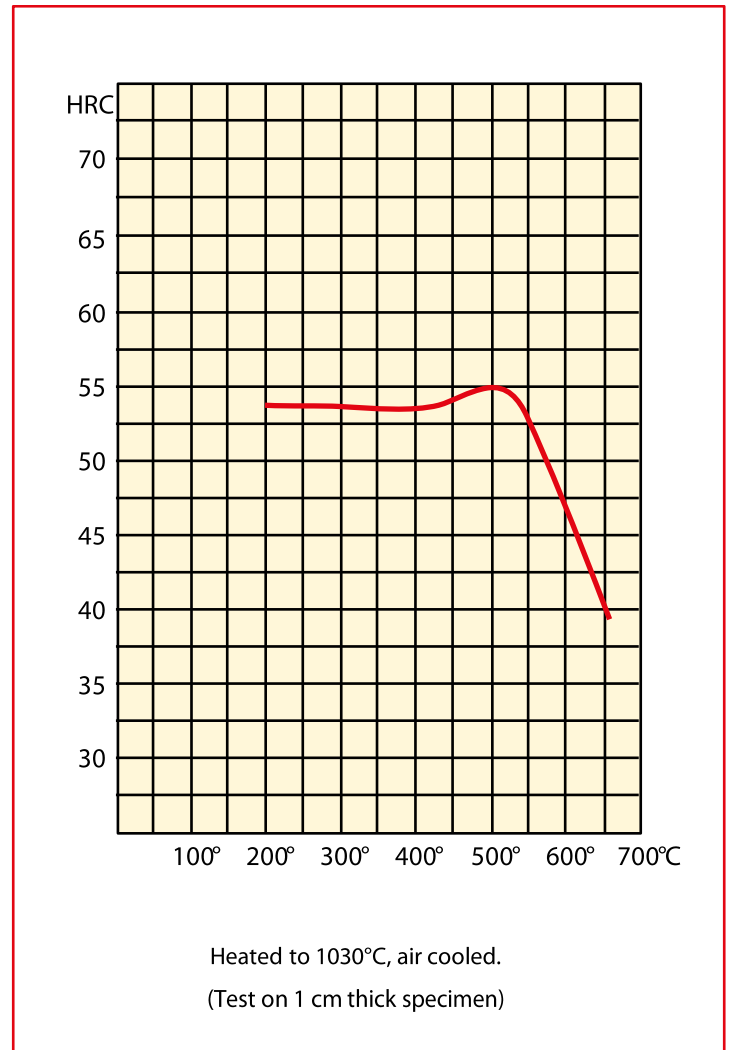
For large parts, air cooling may be replaced by quenching into a salt bath at 240°C, followed by cooling in air to room temperature. It is recommended that heating should take place in a neutral atmosphere.

- Temper:
  - 1<sup>st</sup> temper at 550°C
  - 2<sup>nd</sup> temper between 550°C and 650°C according to hardness required

## PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
  - between 20°C and 100°C:  $10.9 \times 10^{-6}$
  - between 20°C and 300°C:  $11.6 \times 10^{-6}$
  - between 20°C and 500°C:  $12.9 \times 10^{-6}$
- Critical points:
  - Ac 1: 840°C
  - Ac 3: 910°C

## TEMPERING CURVE



Contact:

[www.aubertduval.com](http://www.aubertduval.com)

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