AUBERT&DUVAL

Steel

SMV®4S

X40CrMoV5-1

Consumable electrode remelted steel

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

COMPOSITION

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

APPLICATIONS

- Dies for light alloy die casting

TYPICAL MECHANICAL PROPERTIES

- Softened condition,
  Hardness approximately 240 HB

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:
  - 1st temper at 550°C
  - 2nd temper between 550°C and 650°C according to hardness required

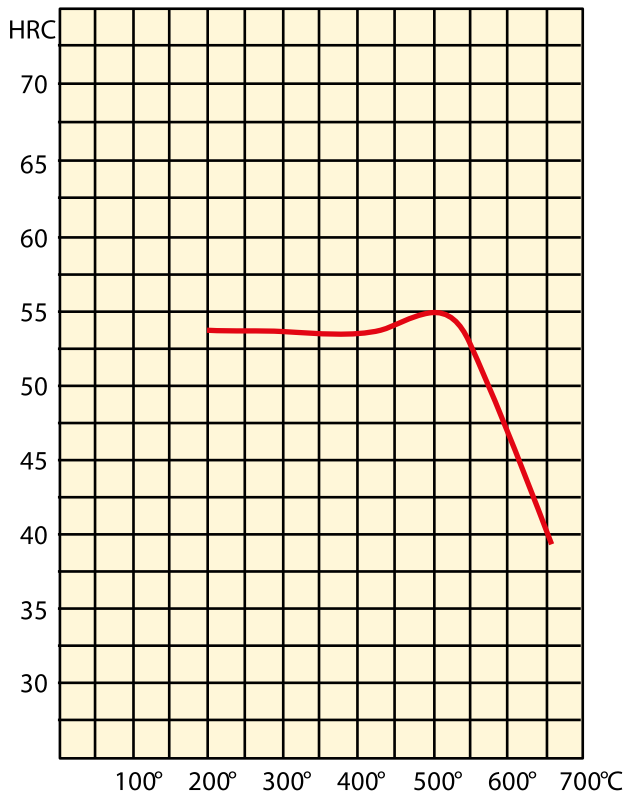
PHYSICAL PROPERTIES

- Density: 7.8

- Mean coefficient of expansion in m/m.°C:
  - between 20°C and 100°C: 10.9 x 10^{-6}
  - between 20°C and 300°C: 11.6 x 10^{-6}
  - between 20°C and 500°C: 12.9 x 10^{-6}

- Critical points:
  - Ac 1: 840°C
  - Ac 3: 910°C

TEMPERING CURVE



Heated to 1030°C, air cooled.
(Test on 1 cm thick specimen)

Contact:

www.aubertduval.com