

MATERIAL NO.:

1.2363

DESIGNATION:
DIN: X 100 CrMoV 5
AFNOR: Z 100 CDV 5
UNI: X 100 CrMoV 5-1 KU
AISI: A2

INDICATORY ANALYSIS:
 C 1.00
 Si 0.30
 Mn 0.50
 Cr 5.20
 Mo 1.10
 V 0.20

STRENGTH:
 max. 240 HB
 (≈ max. 820 N/mm²)

THERMAL CONDUCTIVITY AT 100°C: 19 $\frac{W}{m K}$

COEFFICIENT OF THERMAL EXPANSION
 [10⁻⁶/K]

100°C	200°C	300°C	400°C	500°C	600°C	700°C
11.5	12.4	12.8	13.4			

CHARACTER: » **Steel for through hardening** with good machinability, high wear resistance and low warpage; very good dimensional stability, toughness and through hardenability

APPLICATION: » Cavity plates and inserts as well as cutting punches, wear plates and cutting dies with high requirements on toughness

TREATMENT BY: » Polishing, etching, nitriding, hard chrome plating: possible

HEAT TREATMENT:

- » **Soft annealing:**
 800°C to 840°C for about 4 to 5 hours
 slow controlled cooling inside the furnace: 10 to 20°C per hour to about 600°C;
 further cooling in air, **max. 240 HB**
- » **Hardening:**
 950°C to 980°C
 quenching in oil/air/compressed gas/hot bath
 obtainable hardness: 62 HRC
- » **Tempering:**
 slow heating to tempering temperature immediately after hardening;
 double tempering is recommended
 rapid cooling following the tempering improves the dimensional stability;
 maximum hardness achievable after tempering: **58-60 HRC**

TEMPERING CHART:

