

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/mm<sup>2</sup>)

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

**COEFFICIENT OF THERMAL EXPANSION**  
**[10<sup>-6</sup>/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:**

