

MATERIAL NO.:

1.3343 (HSS)

DESIGNATION:

DIN: HS 6-5-2 C
AFNOR: Z 85 WDCV 6
UNI: X 82 WMoV 6 5
AISI: M 2 reg. C

TECHNICAL TIP:

» Due to the high tempering resistance, excellent for PVD and PACVD coating.

INDICATORY ANALYSIS:

C 0.9
 Si 0.3
 Mn 0.3
 Cr 4.0
 Mo 5.0
 V 1.9
 W 6.2

STRENGTH:

max. 269 HB
 (≈ max. 915 N/mm²)

THERMAL CONDUCTIVITY AT 100 °C:

27.4 $\frac{W}{m K}$

COEFFICIENT OF THERMAL EXPANSION [10⁻⁶/K]

100 °C	200 °C	300 °C	400 °C	500 °C	600 °C	700 °C
10.8	11.8	12.0	12.5			

CHARACTER:

» **High-speed steel** featuring high resistance to adhesive and abrasive wear in combination with high toughness and compressive strength

APPLICATION:

» Blocks for eroding, cold forming tools such as cutting, fine blanking and impact extrusion punches and dies, inserts with a very high wear resistance

TREATMENT BY:

» Polishing:
suitable
 » Nitriding:
highly suitable
 » EDM:
highly suitable
 » Coating:
highly suitable

HEAT TREATMENT:

» Soft annealing:
820 to 850 °C, about 2 to 5 hours
slow controlled cooling inside the furnace of 10 to 20 °C per hour to about 550 °C;
then further cooling in air, **max. 270 HB**
 » Hardening:
1190- 1230 °C
quenching in oil/compressed gas/air/hot bath
obtainable hardness: **66 HRC**
 » Tempering:
slow heating to tempering temperature (to avoid forming of cracks) immediately after hardening;
triple tempering is recommended

TEMPERING CHART:

