meusburger

MATERIAL NO.: 1.2085

DESIGNATION:

DIN:	X 33 CrS 16
AFNOR:	Z35 CD 17.S
UNI:	-
AISI:	≈ 422 + S

INDICATORY ANALYSIS:

C	0.33
Si	0.30
Mn	0.80
Cr	16.00
S	0.06
Ni	0.30

STRENGTH:

280 - 325 HB
(≈ 950 - 1100 N/mm²)

THERMAL CONDUCTIVITY AT 100°C:

18 $\frac{W}{m\,K}$

COEFFICIENT OF THERMAL EXPANSION [10⁻⁶/K]

100°C	200°C	300°C	400°C	500°C	600°C	700°C
10.5	11.0	11.1	11.8			

CHARACTER:

» Corrosion resistant, high-alloy, pre-toughened **tool steel** with good machinability due to sulphur (S) additive

APPLICATION:

» Plates for corrosion resistant mould bases and die sets; moulds for corrosive plastics; better corrosion resistance reduces the amount of mould maintenance required; not suitable for mould inserts

TREATMENT BY:

» Polishing, etching, EDM, nitriding, hard chrome plating: not usual

HEAT TREATMENT:

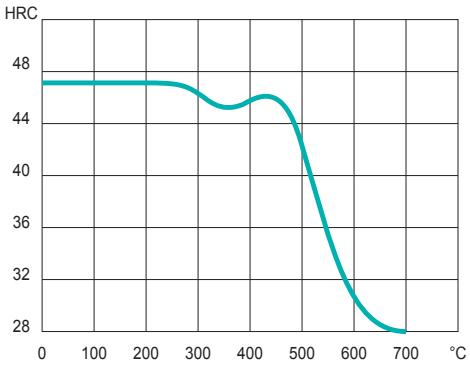
Usually no heat treatment is required.

» Soft annealing:
850 to 880°C for about 2 to 5 hours
slow controlled cooling inside the furnace; annealing hardness **max. 240 HB**

» Hardening:
1000 to 1030°C
keep curing temperature for 30 minutes
quenching in oil is preferable
obtainable hardness: **48 HRC**

» Tempering:
slow heating to tempering temperature immediately after hardening;
minimum time in furnace: 2 hours per 20 mm part thickness;
double tempering is recommended

TEMPERING CHART:



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