Material: 1.2085

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Abbreviated DIN Name: X 33 CrS 16

Chemical Analysis (%):

C	Si	Mn	Cr	S
0,3	0,05	1,0	16,0	0,1

Hardness: annealed to max. 280 - 325 HB
(˜950 - 1100 N/mm²)
depending on x-section

Characteristics

Material Properties:

Corrosion-resistant, pre hardened mould steel with high strength. Good machinability and high strength without subsequent heat treatment.

Uses:

Cavity and frame plates in injection moulding and die-casting tools. Further applications in mould design for metal and plastics processing, where corrosion resistance is required due to aggressive plastics or damp climate conditions.

Physical Properties

Thermal expansion coefficient
(10-6·m) / (m·K)

100	200	300	400	500	600	700	°C
10,5	11,0	11,0	12,0				

Thermal conductivity W / (m·K)	20	350	700	°C
	17,2	21,0	24,7	

Remarks

Polishing: Not usual because of the high Sulphur content.

Graining: Possible to a limited extent, but not usual.

Nitriding: Possible by all known processes, but not usual.

Hardening: Is fundamentally not usual with this material.

Soft annealing: Is fundamentally not usual with this material.

Stress-relief annealing: To eliminate residual stress after coarse machining at max 480°C, approx. 4 h with slow furnace cooling. At higher temperatures, the surface will scale.

Dimensions Available: W x L : Max 1250 x 2000 mm

H - : 25, 35, 40, 50, 60, 70, 80, 90, 100, 110, 130