

Material: Toolox 33



Material No.: TX33

Abbreviated DIN Name: Special Alloy

Chemical Analysis (%)	C	Si	Mn	Cr	V	Ni	Mo
	0,23	0,75	0,8	1,2	0,1	≤1,0	0,3

Hardness: Hardened & tempered
max. 300 HB (~1000 N/mm²)

Characteristics

Material Properties:

Alloyed and pre hardened Tool Steel, specially suited to polishing and has a high dimension stability. Excellent machining properties and minimum sulphur content due to the production process.

Covers applications of steels 1.2311, 1.2312 and 1.2738.

Uses:

Cavity plates and inserts for the plastics and die casting industry. Mould components subjected to high pressure. Other applications in mould design where relatively high strength is specified without subsequent heat treatment.

Remarks

Polishing: Highly suitable for polishing through homogenous structure.

Graining: Well suited

Nitriding: Possible at temperatures up to 590°C. Improves wear resistance and prevents sticking of insets and components.

Hardening: Material is hardened to approx. 29 HRC when supplied and is not intended for further heat treatment.

Soft annealing: Not intended.

Stress-relief annealing: To eliminate residual stress after coarse machining at approx. 540°C, 4 h with slow heating and furnace cooling.

Dimensions Available: W x L : Max 1250 x 2050 mm

H - : 12, 14, 18, 22, 30, 40, 50, 60, 70, 80, 90, 100, 110, 130, 150, 165

Physical Properties

Thermal expansion coefficient

(10⁻⁶·m) / (m·K)

20	200	300	400	500	°C
13,1	13,1				

Thermal conductivity

W / (m·K)

20	350	700	°C
35,0	35,0	30,0	