



444A – Plastic mould steel

Comparable Standards

Werkstoff No.	EN	AISI
1.2312	40CrMnNiMo8-6-4	P20

General information

444A, made in Sweden by Scana Steel Björneborg AB, is a quality alloyed steel which is supplied in the hardened and tempered condition. Scana offers a wide dimensional range and even the large dimensions shows high purity, good homogeneity and a very uniform hardness profile all through the cross section. 444A is the obvious choice when it comes to excellent machinability.

Chemical composition (%)

	C	Si	Mn	S	Cr	Ni	Mo	Others
Approx. Analysis %	0.39	0.35	1.50	0.055	1.87	< 0.4	0.18	+

Non metallic inclusion (cleanliness)

Specification according to ASTM E45-97, A

Grade	Class A		Class B		Class C		Class D	
	thin	thick	thin	thick	thin	thick	thin	thick
444A	Max		Max		Max		Max	
	1,5	1,5	1,5	1,5	1,5	1,5	2,0	2,0

Delivery condition: EAF, VAD, 3D-forged, hardened + double tempered

Hardness / Strength: 29 - 34 HRC / 280 – 325 HB / TS = 950 – 1095 N/mm²

Ultrasonic test standard: acc. to EN 10228-3 class 3

Sizes: Width max 1650 mm; Thickness max 600 mm

Characteristics: General plastic mould steel with high cleanliness, very good machinability and good surface properties.

Applications: Holder for plastic moulds, plastic and rubber moulds with low requirements of polishability.

Physical properties:

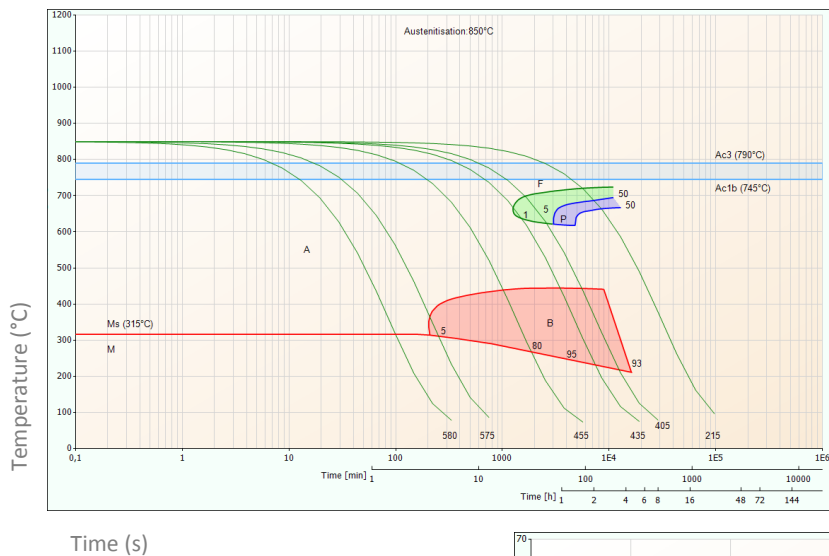
Temp °C	20	100	200	300
Modulus of Elasticity				
GPa	210			
Coefficient of linear Expansion				
10 ⁻⁶ m/mK		12,8	13,0	13,8
Thermal Conductivity				
W/(mK)	33			

Heat treatment

Note: 444A is finish heat-treated in the delivery condition.

	Temp. (°C)	Cooling media
Annealing	700 - 740	air
Hardening	850 - 900	oil (down to 150°C)
Tempering	see tempering diagram	air
Stress relieving	650 - 680	cooling down on air to 450°C
Pre-heating for Welding	320 - 350	air

CCT – diagram (Generated from Dr.Sommer Werstofftechnik HT database)



Tempering - diagram

