



534C – Plastic mould steel

Standards

Werkstoff No.	EN	AISI
1.2738	40CrMnNiMo8-6-4	P20 modified

General information

534C, made in Sweden by Scana Steel Björneborg AB, is a premium quality Cr-Ni-Mo- alloyed steel which is supplied in the hardened and tempered condition. Scana offers a wide dimensional range and even the largest dimensions show high purity, good homogeneity and a very uniform hardness profile all through the cross section. 534C is the obvious choice when it comes to saving time, money and risks.

Chemical composition (%)

	C	Si	Mn	S	Cr	Ni	Mo	Others
Approx. Analysis %	0.40	0.30	1.50	< 0.003	1.90	1.20	0.20	+

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
534C	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: 30 - 34 HRC / 290 – 320 HB / TS = 970 – 1080 N/mm²

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

Sizes: Width max 1500 mm; Thickness max 1200 mm

Characteristics: General plastic mould steel with good through-hardening, high cleanliness, fine bainitic structure overall the cross section, good machinability and good surface properties, good polishability and grainability (for car interior parts and high grade textured surfaces we recommend our improved grade **523C VIP®**).

Applications: Cavities for plastic injection moulds, even for very large sizes, large cores, mould frames, car bumper moulds, car fender moulds, large housings etc

Physical properties:

Temp °C	20	100	200	300
Modulus of Elasticity				
GPa	212	207	199	192
Coefficient of linear Expansion				
10 ⁻⁶ m/mK	11,5	12,1	12,7	13,2
Thermal Conductivity				
W/(mK)	34	35	34	33

Hot forming

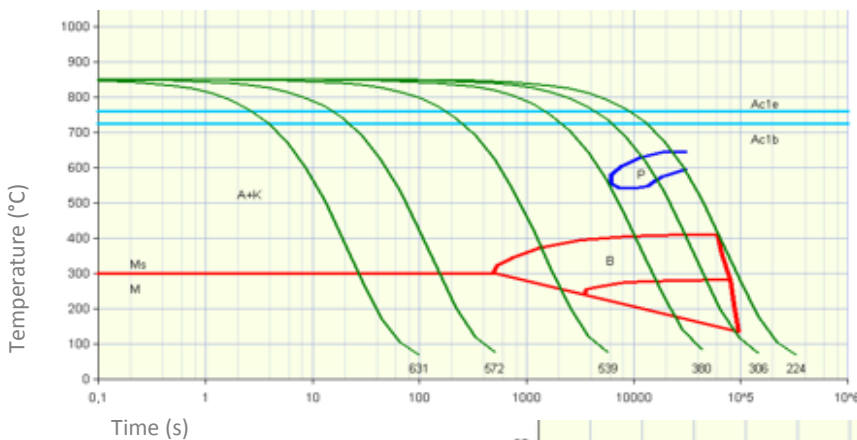
Forging; 1225°C to 700°C / Air cooling

Heat treatment

Note: 534C is finish heat-treated in the delivery condition. Additional Heat-treatment may be necessary for stress relieving after deep milling operation and for volume welding operation.

	Temp. (°C)	Cooling media
Annealing	700 - 740	air
Hardening	850 - 900	Oil (down to 150°C)
Tempering	560 - 600	cooling down on air to 450°C
Stress relieving	520 - 540	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

