

Material specification sheet

Saarstahl - 18NiCr5-4 (18NiCr6-4)

Material No.:

Former brand name:

International steel grades:

1.5810

BS:

AFNOR:

SAE:

Material group:

Case hardening steels according to DIN EN 10084

Chemical composition: (Typical analysis in %)	C	Si	Mn	P	S	Cr	Ni
	0,16 0,21	<0,40	0,60 0,90	<0,035	<0,035	0,90 1,20	1,20 1,50

Application:

Alloyed case hardening steel.

Hot forming and heat treatment:

Forging or hot rolling:	1100 - 850°C
Normalising:	840 - 870°C
Soft annealing:	650 - 700°C
Carburising:	880 - 980°C
Core hardening:	840 - 880°C
Intermediate annealing:	650 - 700°C
Case hardening:	780 - 820°C
Tempering:	150 - 200°C

Mechanical Properties:

Treated for cold shearability, +S:	max. 255 HB
Soft annealed, +A:	max. 223 HB
Treated for strength, +TH:	170 - 223 HB
Treated for ferrite and pearlite structure and hardness range, +FP:	156 - 207 HB

after hardening and tempering at 200°C:

Diameter d [mm]	d ≤ 16	16 < d ≤ 40	40 < d ≤ 100
Tensile strength R _m [N/mm ²]	min. 1200	min. 1100	min. 900