

Material specification sheet

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

Material No.:

1.5810

Former brand name:

International steel grades:

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