

Material specification sheet

18CrNiMo7-6 (17CrNiMo6)

Material No.: 1.6587
 Former brand name: Monix F
 International steel grades: BS: 18NCD6
 AFNOR: 18NCD6
 SAE:

Material group: Case hardening steels according to DIN EN 10084

Chemical composition: (Typical analysis in %)	C	Si	Mn	Cr	Mo	Ni	other
	0,17	0,25	0,50	1,65	0,30	1,55	(Pb)

Application: Alloyed case hardening steel for heavy and high strained gear parts with high demands on toughness at core tensile strength of 1050 - 1350 N/mm².

Hot forming and heat treatment:

Forging or hot rolling:	1150 - 850°C
Normalising:	850 - 880°C/air
Soft annealing:	650 - 700°C/furnace
Carburising:	880 - 980°C
Core hardening:	830 - 870°C/water
Intermediate annealing:	630 - 650°C
Case hardening:	780 - 820°C/water
Tempering:	150 - 200°C

Mechanical Properties:

Treated for cold shearability, +S:	max. 255 HB
Soft annealed, +A:	max. 229 HB
Treated for strength, +TH:	179 - 229 HB
Treated for ferrite and pearlite structure and hardness range, +FP:	159 - 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