

Material specification sheet

Saarstahl - 20NiCrMo2-2 (21NiCrMo2) - 20NiCrMoS2-2

Material No.:	Former brand name:	International steel grades:
1.6523	Monix E	BS: 805M20, 806M20 AFNOR: 20NCD2, 22NCD2 SAE: 8620
1.6526		

Material group: Case hardening steels according to DIN EN 10084

Chemical composition: (Typical analysis in %)	C	Si	Mn	Cr	Mo	Ni	other
	0,21	0,25	0,75	0,50	0,20	0,55	(Pb)

Application: Alloyed case hardening steel for very high strained parts and good toughness at core tensile strength of 700 - 900 N/mm². Driving bevel gears, crown wheels, gears, shafts, bolts for automotive and gear components. Suitable for direct hardening.

Hot forming and heat treatment:	Forging or hot rolling:	1100 - 850°C
	Normalising:	850 - 880°C/air
	Soft annealing:	650 - 700°C/furnace
	Carburising:	880 - 980°C
	Core hardening:	860 - 900°C/oil, water
	Intermediate annealing:	630 - 650°C
	Case hardening:	780 - 820°C/oil, water
	Tempering:	150 - 200°C

Mechanical Properties:	Treated for cold shearability, +S:	Shearable in as rolled condition
	Soft annealed, +A:	max. 212 HB
	Treated for strength, +TH:	161 - 212 HB
	Treated for ferrite and pearlite structure and hardness range, +FP:	149 - 194 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. 1100	min. 800	min. 700