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
1.6526		**SAE:**	8620

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/mm²]	min. 1100	min. 800	min. 700