

Material specification sheet

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

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|---------------|--------------------|---|
| 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.

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|--|-------------------------|------------------------|
| 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 |