STEEL GRADE DATASHEET · ÇELIK KALITESI FÖYÜ

36CrNiMo4

Nickel-Chromium-Molybdenum Q&T Steel (EN 10083-3)

W.-Nr. **1.6511** | AISI/SAE ≈ **9840** | EN 10083-3 | Delivery **+A, +QT** | Density **7.85 g/cm³**

CHEMICAL COMPOSITION

ELEMENT	WEIGHT %
C	0.32–0.40
Si	≤ 0.40
Mn	0.50–0.80
P	≤ 0.025
S	≤ 0.035
Cr	0.90–1.20
Mo	0.15–0.30
Ni	0.90–1.20

MECHANICAL PROPERTIES (+QT)

SECTION (MM)	R_{EH} MIN MPA	R_M MPA	A MIN %
d ≤ 16	900	1100–1300	10
16 < d ≤ 40	800	1000–1200	11
40 < d ≤ 100	700	900–1100	12
100 < d ≤ 160	600	800–950	13

Hardness Note: +A (soft annealed): max. 248 HB (EN 10083-3) · +QT: Rm 800–1300 MPa ≈ 235–385 HB (approximate conversion per EN ISO 18265; for +QT the standard specifies strength, not hardness).

INTERNATIONAL EQUIVALENTS

EN	36CrNiMo4
W.-Nr. (DIN)	1.6511
PN (Poland, old)	≈ 36HNM
AISI/SAE	≈ 9840
BS 970 (UK)	≈ 816M40 (EN110)

TYPICAL APPLICATIONS

- Medium and large-section shafts and axles
- Heavily loaded gears and gear shafts
- Connecting rods and dynamically loaded forgings
- High-strength bolts, studs and fasteners
- Hydraulic and construction machinery parts
- Machine and vehicle parts subject to impact loads

Values are given per the relevant standard and are for information only; they do not replace the order specification. They may vary with section size, delivery condition and heat treatment. Binding values are those of the order confirmation and inspection document (EN 10204 3.1).

Quotation and stock
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