STEEL GRADE DATASHEET · ÇELIK KALITESI FÖYÜ

50CrMo4

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

W.-Nr. **1.7228** | AISI/SAE ≈ **4150** | EN 10083-3 | Delivery **+A, +QT** | Density **7.85 g/cm³**

CHEMICAL COMPOSITION

ELEMENT	WEIGHT %
C	0.46–0.54
Si	≤ 0.40
Mn	0.50–0.80
P	≤ 0.025
S	≤ 0.035
Cr	0.90–1.20
Mo	0.15–0.30

MECHANICAL PROPERTIES (+QT)

SECTION (MM)	R_{EH} MIN MPA	R_M MPA	A MIN %
d ≤ 16	900	1100–1300	9
16 < d ≤ 40	780	1000–1200	10
40 < d ≤ 100	700	900–1100	12
100 < d ≤ 160	650	850–1000	13
160 < d ≤ 250	550	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	50CrMo4	**AISI/SAE**	≈ 4150
W.-Nr. (DIN)	1.7228	**BS 970 (UK)**	≈ 708A47

TYPICAL APPLICATIONS

- Heavily loaded shafts and axles
- Induction-hardened gears, pinions and racks
- Rings, bushings and tyres
- Steering and control parts for vehicles and construction machinery
- Large-section forged machine parts
- High-strength parts for hydraulic and mining equipment

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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