STEEL GRADE DATASHEET · ÇELIK KALITESI FÖYÜ

41Cr4

Chromium Alloy Steel for Quenching and Tempering

W.-Nr. **1.7035** | AISI/SAE ≈ **5140** | EN 10083-3 | Delivery **+A, +QT** | Density **7.85 g/cm³**

CHEMICAL COMPOSITION

ELEMENT	WEIGHT %
C	0.38–0.45
Si	≤ 0.40
Mn	0.60–0.90
P	≤ 0.025
S	≤ 0.035 (41CrS4: 0.020–0.040)
Cr	0.90–1.20

MECHANICAL PROPERTIES (+QT)

SECTION (MM)	R_{EH} MIN MPA	R_M MPA	A MIN %
d ≤ 16	800	1000–1200	11
16 < d ≤ 40	660	900–1100	12
40 < d ≤ 100	560	800–950	14

Hardness Note: +QT: Rm 800–1200 MPa ≈ 240–355 HB · HB values are an approximate conversion per EN ISO 18265; EN 10083-3 specifies strength, not hardness, for +QT · +A (soft annealed) for machining.

INTERNATIONAL EQUIVALENTS

EN	41Cr4
W.-Nr. (DIN)	1.7035
EN (S)	41CrS4 1.7039
AISI/SAE	≈ 5140
JIS	≈ SCr440
GOST	≈ 40X (40Kh)
AFNOR (old)	≈ 42C4
BS 970 (UK)	≈ 530M40 (EN18)
GB (China)	≈ 40Cr

TYPICAL APPLICATIONS

- Axle shafts and steering components
- Gears and pinions under moderate load
- High-strength bolts, studs and nuts
- Induction-hardened shafts, pins and journals
- Forged machine parts
- Crank and connecting elements

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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