STEEL GRADE DATASHEET · ÇELIK KALITESI FÖYÜ

C35

Medium-Carbon Steel for Quenching and Tempering

W.-Nr. **1.0501** | AISI/SAE ≈ **1035** | EN 10083-2 | Delivery **+A, +N, +QT** | Density **7.85 g/cm³**

CHEMICAL COMPOSITION

ELEMENT	WEIGHT %
C	0.32–0.39
Si	≤ 0.40
Mn	0.50–0.80
P	≤ 0.045 (C35E/C35R ≤ 0.030)
S	≤ 0.045 (C35E ≤ 0.035; C35R 0.020–0.040)
Cr	≤ 0.40
Mo	≤ 0.10
Ni	≤ 0.40
Cr+Mo+Ni	≤ 0.63

MECHANICAL PROPERTIES (+QT)

SECTION (MM)	R_{EH} MIN MPA	R_M MPA	A MIN %
d ≤ 16	430	630–780	17
16 < d ≤ 40	380	600–750	19
40 < d ≤ 100	320	550–700	20

Hardness Note: +QT: Rm 550–780 MPa ≈ 165–230 HB · +N: Rm ≥ 500–550 MPa · HB values are an approximate conversion per EN ISO 18265; EN 10083-2 specifies strength, not hardness, for +N/+QT.

INTERNATIONAL EQUIVALENTS

EN	C35	**AISI/SAE**	≈ 1035
W.-Nr. (DIN)	1.0501	**JIS**	≈ S35C
EN (E / R)	C35E 1.1181 / C35R 1.1180	**GOST**	35 (сталь 35)
DIN 17200 (old)	Ck35 (= C35E)	**GB (China)**	35

TYPICAL APPLICATIONS

- Moderately stressed shafts, axles and pins
- Bolts, studs and fasteners
- Forgings for general mechanical engineering
- Gears and couplings under moderate load
- Levers, hubs and connecting parts
- Hydraulic and agricultural machinery components

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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