STEEL GRADE DATASHEET · ÇELIK KALITESI FÖYÜ

C55

Non-Alloy Q&T Steel (EN 10083-2)

W.-Nr. **1.0535** | AISI/SAE ≈ **1055** | EN 10083-2 | Delivery **+A, +N, +QT** | Density **7.85 g/cm³**

CHEMICAL COMPOSITION

ELEMENT	WEIGHT %
C	0.52–0.60
Si	≤ 0.40
Mn	0.60–0.90
P	≤ 0.045 (C55E/C55R ≤ 0.030)
S	≤ 0.045 (C55E ≤ 0.035; C55R 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	550	800–950	12
16 < d ≤ 40	490	750–900	14
40 < d ≤ 100	420	700–850	15

Hardness Note: +A: max. 229 HB (EN 10083-2) · +QT: Rm 700–950 MPa ≈ 205–280 HB · +N: Rm ≥ 620–680 MPa ≈ 180–200 HB and above (HB values are an approximate conversion per EN ISO 18265).

INTERNATIONAL EQUIVALENTS

EN	C55
W.-Nr. (DIN)	1.0535
EN (E / R)	C55E 1.1203 / C55R 1.1209
DIN 17200 (old)	Ck55 (= C55E) / Cm55 (= C55R)
AISI/SAE	≈ 1055
JIS	≈ S55C
GOST	≈ 55 (сталь 55)
BS 970 (UK)	≈ 070M55 (EN9)
GB (China)	≈ 55

TYPICAL APPLICATIONS

- Shafts, axles and spindles
- Induction- or flame-hardened gears, sprockets and racks
- Rolls, rollers and guide rails
- Cutting and wear parts in agricultural machinery
- Machine parts needing more wear resistance than C45
- Hand tools and forged parts

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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