STEEL GRADE DATASHEET · ÇELIK KALITESI FÖYÜ

C22E

Low-Carbon Non-Alloy Special Steel

W.-Nr. **1.1151** | AISI/SAE ≈ **1020** | EN 10083-2 | Delivery **+A, +N, +QT** | Density **7.85 g/cm³**

CHEMICAL COMPOSITION

ELEMENT	WEIGHT %
C	0.17–0.24
Si	≤ 0.40
Mn	0.40–0.70
P	≤ 0.030
S	≤ 0.035
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	340	500–650	20
16 < d ≤ 40	290	470–620	22

Hardness Note: +QT: Rm 470–650 MPa ≈ 140–195 HB · +N: Rm ≥ 400–430 MPa · HB values are an approximate conversion per EN ISO 18265; EN 10083-2 specifies strength, not hardness, for +N/+QT.

INTERNATIONAL EQUIVALENTS

EN	C22E
W.-Nr. (DIN)	1.1151
EN (base / R)	C22 1.0402 / C22R 1.1149
DIN 17200 (old)	Ck22
AISI/SAE	≈ 1020
JIS	≈ S20C
GOST	≈ 20 (сталь 20)
BS 970 (UK)	≈ 070M20 (EN3B)
GB (China)	≈ 20

TYPICAL APPLICATIONS

- Welded machine and frame components
- Forgings for general mechanical engineering
- Case-hardened pins and bushes with modest core-strength needs
- Cold-formed and machined parts
- Levers, hubs and couplings
- Lightly stressed shafts and axles

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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