

HABA CK45

Unalloyed tempering steel
Grinded plates cut to size

Material no.	1.1191
Steel quality	Tempering steel
Designation	C45E+N

Heat treated and stress relieved steel by HABA with excellent workability and high dimensional stability. Suitable for intensively processed components, for medium stress in mechanical engineering, toolmaking and vehicle construction.

FINISHES

Thickness	grinded \leq Ra1.6 (N7)
Tolerance	+0.3/+0.2 mm
Parallelism	\leq 0.03 mm
Evenness	\leq 0.1 mm
Length/width	Ra6.3-12.5 cut with a precision circular saw
HABA standard tolerance	nominal size +0.8/+0.3 mm
Customer-specific tolerance	within a tolerance field of 0.4 mm
Surface refinement	All metallic and non-metallic coatings

We also manufacture rolled and milled blanks on request as well as special thicknesses and tolerances.

TECHNICAL SPECIFICATIONS

Tensile strength R_m	560-620 (N/mm ²)
Yield strength R_e	275-340 (N/mm ²)
Breaking strain ($L_0 = 5 d_0$) A_5	14-16 %
Impact energy A_V (J)	\geq 25
Brinell hardness (HB30)	175-210
Density	7.85 kg/dm ³
E-module	\sim 210 kN/mm ²
Thermal conductivity coefficient	35-45 (W/mK)
Thermal expansion coefficient	11-14 (10 ⁻⁶ /K)

CHEMICAL COMPOSITION

Carbon	C	0.42-0.50 %	Chromium	Cr	\leq 0.40 %
Silicium	Si	\leq 0.40 %	Molybdenum	Mo	\leq 0.10 %
Manganese	Mn	0.50-0.80 %	Nickel	Ni	\leq 0.40 %
Phosphor	P	\leq 0.035 %	(Cr + Mo + Ni)		\leq 0.63 %
Sulfur	S	\leq 0.035 %			

MATERIAL IN USE

Apparatus construction
Special purpose machinery
Jig manufacturing
Toolmaking
Mould construction
Plant construction

APPLICATIONS

Base plates
Straightening plates
Table tops
Tools
Rack gears
Machined and engineered parts of all kinds
Jigs
Setting jigs

PROPERTIES

machinability	very good
dimensional stability	very good
impact resistance	high
weldability	limited
hardenable	flame hardening inductive hardening nitriding

