

HABA EC80

Case-hardened steel

Grinded plates cut to size

Material no.	1.7131
Steel quality	Case-hardened steel
Designation	16MnCr5

Normalised and additionally low-tension annealed case-hardened steel with excellent machinability and high dimensional stability. Suitable for mechanical engineering parts such as gear wheels and gear parts with a hard, wear-resistant surface and a tough core.

FINISHES

Thickness	grinded Ra1.6 (N7)
Tolerance	+0.4/+0.3 mm
Parallelism	≤0.05 mm
Evenness	≤0.15 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	ca. 700 (N/mm ²)
Yield strength	R_e	ca. 550 (N/mm ²)
Breaking strain	($L_o = 5 d_o$) A_5	9-11 %
Impact energy	A_V (J)	≥34
Brinell hardness	HB	138-187
Density		7.85 kg/dm ³
E-module		~210 kN/mm ²
Thermal conductivity coefficient		35-45 (W/mK)
Thermal expansion coefficient		11-14 (10 ⁻⁶ /K)

MATERIAL IN USE

Mechanical engineering
Special purpose machinery
Mould construction
Prototype construction
Jig manufacturing
Toolmaking
Plant construction
Apparatus construction

APPLICATIONS

Feeders
Gear-wheels
Piston rods
Sliding rods
Equipment base plates
Clamping and hole grid systems
Bending beams
Edging tool

PROPERTIES

machinability	very good
dimensional stability	very good
hardenable	case hardening nitriding

We declare that our products are not suitable for any other applications and purposes, other than those specified here and do not have other product properties than those specified here.

CHEMICAL COMPOSITION

Carbon	C	0.14-0.19 %	Chromium	Cr	0.80-1.10 %
Silicium	Si	≤0.40 %	Molybdenum	Mo	-
Manganese	Mn	1.00-1.30 %	Nickel	Ni	-
Phosphor	P	≤0.035 %	Vanadium	V	-
Sulfur	S	≤0.035 %	Nitrogen	N	-

