

# HABA 2316-S

Plastic mould steel

Grinded plates cut to size

Material no.	1.2085
Steel quality	Plastic mould steel
Designation	X33CrS16

Tempered, corrosion-resistant plastic mould steel with good machinability and dimensional stability. It is used as pattern plates in plastic injection dies and also for corrosion-resistant components for mechanical engineering.

## FINISHES

Thickness	grinded $\leq$ Ra1.6 (N7)
Tolerance	+/-0.1 mm
Parallelism	$\leq$ 0.05 mm
Evenness	$\leq$ 0.2 mm
Length/width	Ra12.5 (N10) 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

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

## TECHNICAL SPECIFICATIONS

Tensile strength $R_m$	950-1100 (N/mm <sup>2</sup> )
Yield strength $R_{p0.2}$	ca. 750-950 (N/mm <sup>2</sup> )
Breaking strain $(L_0 = 5 d_0) A_5$	$\geq$ 5 %
Brinell hardness (HB)	280-325
Thermal conductivity coefficient	35-45 (W/mK)
Thermal expansion coefficient	10.5-12 (10 <sup>-6</sup> /K)

## HEAT TREATMENT

Soft annealing	850-880°C
Low-stress annealing	550-600°C
Hardening	1000-1050°C / Oil, heat bath
Tempering	180-500°C

## CHEMICAL COMPOSITION

Carbon	C	0.28-0.38 %	Chromium	Cr	15.0-17.0 %
Silicium	Si	$\leq$ 1.00 %	Molybdenum	Mo	-
Manganese	Mn	$\leq$ 1.40 %	Nickel	Ni	$\leq$ 1.00%
Phosphor	P	$\leq$ 0.03 %	Vanadium	V	-
Sulfur	S	0.05-0.10 %	Nitrogen	N	-

## MATERIAL IN USE

Mould construction  
Jig manufacturing  
Mechanical engineering  
Plant construction  
Toolmaking

## APPLICATIONS

Retaining plates for plastic moulds  
Base plates  
Machined and engineered parts of all kinds

## PROPERTIES

machinability	very good
dimensional stability	good
corrosion resistance	good
compression strength	high

## TEMPERING DIAGRAM

