

# X40CrMoV5-1

W.Nr. 1.2344

## Properties

hot working tool steel; high level toughness, good high temperature strength  
enduse = tools for dies, die inserts, extrusions, hot shearing knives, plastic processing

## Chemical composition

C=0,35-0,42	Si=0,80-1,20	Mn=0,25-0,50	P=max.0,025	S=max.0,010
Cr=4,80-5,50	Mo=1,20-1,50	V=0,85-1,15		

DIN EN ISO 4957

## Grade equivalents Similar grades

BH 13 BS	----- GB	Z40CDV5 AFNOR	SKD 61 JIS	19554 CSN
H 13 AISI / SAE	X40CrMoV511KU UNI	2242 SS	4Ch5MF1S GOST	F.5318 UNE

## General conditions

**Heat treatment** =+A DIN EN ISO 4957

**Hardness** max. 229 HB

**Surface** surface flaws / cracks if any are removed by polishing.  
cleaning marks/scale pitting/peripheral decarburisation within the standard machining allowance is allowed.

**US test** SEP 1921 group 3, class D/d or  
EN 10228-3 quality grade 3, 100% scanning or  
specific FBH eq.

**Degree of Purity** DIN 50 602, K4 max. 20

**Microstructure** soft annealed / acc. to SEP 1614, max. figures as follows :  
segregation = SA1-SA4; SB1-SB4;SC1-SC4;SD1-SD4  
microstructure = GA1-GA5; GB1-GB4;GC1-GC2;GD1-GD2;GE1

## Hot rolled and/or forged, peeled and/or turned

Ø 15 - 553 mm

**Tolerances** - 0 / + 0,8 - 4,0 mm ( dep. on dia ) or specific tol.  
**Lengths** 2,5 - 5,5 m or specific lengths ends of bars are sawn

## Hot rolled, black and/or Hot rolled all sides machined

20 - 105 x  
90 - 610 mm

**Tolerances** EN 10058 positiv allowance only or  
DIN 50602 positiv allowance only or  
specific tol.  
**Lengths** 2,5 - 5,5 m or specific lengths ends of bars are sawn

## Hot rolled and/or forged, black Hot rolled and/or forged, black all sides machined

20 x 20 -  
500 x 500 mm

**Tolerances** EN 10059 positiv allowance only or  
DIN 7527 / 6 positiv allowance only or  
specific tol.  
**Lengths** 2,5 - 5,5 m or specific lengths ends of bars are sawn

## Forged, black and/or forged all side machined

100 - 455 x  
120 - 1.050 mm

**Tolerances** DIN 7527 / 6 positiv allowance only or  
specific tol. positiv allowance only  
**Lengths** 2,5 - 5,5 m or specific lengths ends of bars are sawn

## Test certificate

EN 10204/3.1 with chem. Analysis; hardness HB ; heat treatment ; US test  
( copy of original on our letter head ! )

- supply range file - issued: 20.02.2009 rev. 1