

X40CrMoV5-1-ESR

W.Nr. 1.2344

Properties

hot working tool steel; highest level of toughness, temperature fatigue resistant
enduse = tools for highly stressed extrusion dies and die casting moulds, press dies

Chemical composition

C=0,35-0,42	Si=0,80-1,20	Mn=0,25-0,50	P=max.0,025	S=max.0,008
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	-----	Z40CDV5	SKD 61	19554
BS	GB	AFNOR	JIS	CSN
H 13	X40CrMoV511KU	2242	4Ch5MF1S	F.5318
AISI / SAE	UNI	SS	GOST	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 E/e or
EN 10228-3 quality grade 4, 100% scanning or
specific FBH eq.

Degree of Purity DIN 50 602, K1 max. 30

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

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

Ø 553 – 903 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, 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 - 605 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