

X38CrMoV5-3 ESR

W.Nr. 1.2367

Properties

hot working tool steel; high level / temperature toughness
enduse = extrusion tools / injection moulds / die inserts / mandrels

Chemical composition

C=0,35-0,40	Si=0,30-0,50	Mn=0,30-0 50	P=max.0,025	S=max.0,008
Cr=4,80-5,20	Mo=2,70-3,30	V=0,40-0,60		

DIN EN ISO 4957

Grade equivalents Similar grades

----- BS	----- GB	----- AFNOR	----- JIS	----- CSN
----- 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 15 - 403 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 -
300 x 300 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 - 405 x
120 - 805 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