

Classifications

EN 14700	DIN 8555	Material-No.
S Z Fe3	MSG 3-GZ-45-T	Special alloy

Characteristics and field of use

WEARmig Tool 45 is, due to the excellent hot wear resistance and toughness, used for highly stressed hot working tools, which are simultaneously subject to high mechanical, thermal and abrasive loads, such as e.g. forging dies for hammers and presses, forging dies, Al-die cast moulds, plastic moulds, hot-shear blades and for filling engravings by using cheaper base metals.

Machining is possible with tungstene carbide tools.

Hardness of the pure weld deposit:

untreated	42 – 46 HRC
soft-annealed 780° C	approx. 230 HB
hardened 1030° C/oil	approx. 48 HRC
tempered 600° C	approx. 45 HRC
1 layer on non-alloy steel	approx. 35 HRC

Typical analysis in %

C	Si	Mn	Cr	Mo	Ti	Fe
0.25	0.5	0.7	5.0	4.0	0.6	balance

Welding instruction

Machine welding area to metallic bright. Cracks in the base material have to be gouged out completely. Preheating temperature of 400 °C on tools should be maintained. Stress relief/annealing is recommended at 550 °C.

Approvals

TÜV (No. 06741)

Wire diameter [mm]	Current type	Shielding gas (EN ISO 14175)			
1.0	DC (+)	M 12	M 13	M 21	C 1
1.2	DC (+)	M 12	M 13	M 21	C 1
1.6	DC (+)	M 12	M 13	M 21	C 1