

UTOPWELD 45

Electrodes MMA [SMAW]

Hardfacing and repairing

CLASSIFICATION:	APPROVALS:	APPLICATION:
DIN 8555 : E3-UM-50-T		Hardfacing and repairing

- A basic electrode for the repair of hot working tools.
- Recommended for the regeneration of hard edges or tool surfaces of low-alloy steels with increased strength.

Recommendations:

- Depending on the base material, it is recommended to heat the material and maintain the interpass temperature between 300°C and 450°C.
- After surfacing, slow cooling should take place.
- Cures between 1060°C and 1120°C (oil, hot bath, compressed air)
- Tempering: approx. 3h / temperature depending on the desired hardness
- Soft annealing: 2 - 4 h at 800°C to 840°C / carry out slow cooling in the furnace

Application

Punching dies, die inserts, cutting tools, shears for sheet metal, drawing tools, forging dies.

Base material

1.2365	32CrMoV12-283	1.2713	55NiCrMoV6
1.2567	30WCrV17-2	1.2714	55NiCrMoV7
1.2581	X30WCrV9-3		

Typical chemical composition %

C	Cr	V	W
0,30	2,20	0,60	4,20

Typical mechanical properties

Hardness app. 47 HRC after hardfacing / app. 52 HRC after hardening in 560°C / app. 49 HRC after hardening in 450°C / app. 48 HRC after hardening in 350°C / app. 250 HB after annealing /

Welding positions



Redrying

300°C +/- 10°C / 1h

Welding parameters and packing

∅	Length [mm]	Welding current [A]	Weight of packet [kg]	Weight of carton [kg]
3,2	350 /	80 - 120	5,0	15,0
4,0	350 /	110 - 150	5,0	15,0
5,0	450 /	140 - 180	5,0	15,0

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