

## Classifications

DIN 8555	EN 14700	AWS A5.13
E 4-UM-60-ST	E Fe4	E Fe 5-B (mod.)

## Characteristics and field of use

UTP 690 is used for repair and production of cutting tools, particularly for building-up cutting edges and working surfaces. The deposit is highly resistant to friction, compression and impact, also at elevated temperatures up to 550° C. The production of new tools by welding on non-alloy and low-alloy base metals is also possible (cladding of cutting edges).

UTP 690 has excellent welding properties, a smooth, finely rippled bead appearance due to the spray arc and very easy slag removal. The weld deposit is equivalent to a high speed steel with increased Mo-content.

Hardness of the pure weld metal:	approx. 62 HRC
soft annealed 800 – 840° C	approx. 25 HRC
hardened 1180 – 1240° C and tempered 2 x 550° C	approx. 64 – 66 HRC

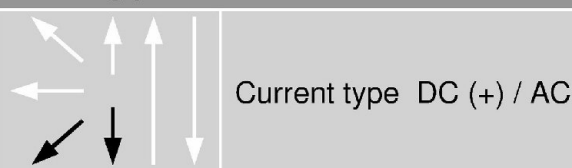
## Typical analysis in %

C	Si	Mn	Cr	Mo	V	W	Fe
0,9	0,8	0,5	4,5	8,0	1,2	2,0	balance

## Welding instruction

Clean the welding area and preheat high-speed steel tools to 400 – 600° C, maintain this temperature during the whole welding process, followed by slow cooling. Machining by grinding is possible. Hold stick electrode vertically and with a short arc. Redry stick electrodes that have got damp for 2h/300° C.

## Welding positions



## Recommended welding parameters

Electrodes Ø x L [mm]	2,5 x 350	3,2 x 350	4,0 x 450
Amperage [A]	70 – 90	90 – 110	110 – 130

