

## MMA Electrodes C-Mn and low-alloy steels

UNIVERS is a basic coated MMA electrode depositing comparatively low tensile strength and high toughness weld metal. Recommended for avoiding cracking when welding highly restrained structural members with large weld cross sections or when stress relieving is not possible.

Classification	
EN ISO	2560-A: E 38 6 B 42 H5
EN	499: E 38 6 B 42 H 5

Approvals	Grade
DB	●
TÜV	●

CE

### Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.07	0.9	0.4	≤ 0.020	≤ 0.015

### All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				-40 °C	-60 °C
As Welded	355-430	440-550	≥ 28	≥ 120	≥ 100

### Materials

S(P)235-S(P)355, GP240-GP280; L245-L290

### Storage

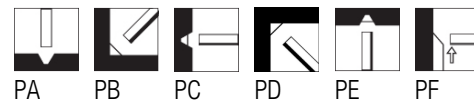
Keep dry and avoid condensation.

HD ≤ 5: Re-dry at 340-360 °C for 2 hours, 5 times max

HD ≤ 10: Re-dry at 300-350 °C for 2 hours, 5 times max

### Current condition and welding position

AC; DC+



### Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weight (kg/1000)	CBOX		VPMD	
				PC	Code	PC	Code
2.5	350	60-85	19.5	220	●	110	●
3.2	350	90-140	34.2	125	●	60	●
4.0	450	140-190	67.0	80	●	40	●
5.0	450	170-260	107.9	50	●	25	●