

MMA Electrodes C-Mn and low-alloy steels

Rutile electrode with easily detachable slag. Suitable for welding in the downhand position. Smaller diameters are also suitable for positional welding. Spatter free arc combined with a very smooth bead appearance. Excellent mechanical properties. Efficiency 100%.

Classification	
AWS	A5.1:E 6013
EN	499:E 42 A R 12
EN ISO	2560-A: E 42 A R 12

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.09	0.65	0.40	≤ 0.030	≤ 0.030	-	-	-	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 420	500 - 640	≥ 20	≥ 47	-

Materials

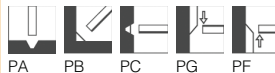
S(P)235 to S(P)355; GP240; GP280

Storage and redrying

Keep dry and avoid condensation. Re-drying not generally required. If necessary: 100-110 °C for 1 hour.

Current condition and welding position

AC; DC-



Packaging data

Diameter (mm)	Length (mm)	Current (A)	Electrode average weight (g)	Weld metal weight per electrode (g)
1,5	250	20-50	5,7	3,1
2,0	300	40-65	10,6	6,5
2,5	300	60-100	17,4	10,3
3,2	450	70-130	43,4	25,8
4,0	450	120-160	60,4	37,1