

SAFER N 49™

MMA Electrodes

C-Mn and low-alloy steels

SAFER N 49 is a basic, double-coated multi-purpose MMA electrode. The composition of the double coating confers exceptionally good welding characteristics and a highly stable and directional arc. Very good gap bridging and ideally suited for root passes and positional welding. The glassy slag is easily removed from the finely-rippled weld seams, the excellent welding characteristics and ISO-V toughness to -20°C have made SAFER N 49 a renowned and reliable electrode for welding structural steelwork, production and assembly jobs in industry and for pipeline construction for decades. Welds are of X-ray quality. Optimum AC weldability requires an OCV > 65V.

Classification	
EN ISO	2560-A: E 38 3 B 12 H10
AWS	A5.1: E 7016 H8

Approvals	
DB	TÜV
●	●

CE

Chemical analysis (Typical values in %)

	C	Mn	Si	P	S
All weld metal	0.06	0.9	0.7	≤ 0.020	≤ 0.015

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
As Welded	≥ 380	470-600	≥ 22	≥ 80

Materials

S(P)235-S(P)355; GP240-GP280; L245-L360

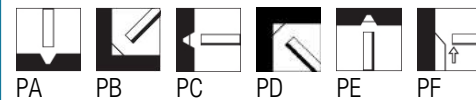
Storage

Keep dry and avoid condensation.

HD ≤ 10 ml/100g: 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. weightn(kg/1000)	CBOX		SMPA		VPM D	
				PC	Code	PC	Code	PC	Code
2.0	300	55-65	10.6	330	●			160	●
2.5	300	60-90	15.5	200	●			100	●
2.5	350	60-90	19.7	200	●	45	●	100	●
3.2	350	95-150	33.0	125	●	25	●	55	●
3.2	450	95-150	42.7	125	●			55	●
4.0	450	140-190	65.0	80	●			40	●
5.0	450	190-250	100.4	50	●			25	●

SAFER NF 510S

MMA Electrodes

C-Mn and low-alloy steels

SAFER NF 510S is a low hydrogen electrode allows welding with a stable arc and a very low spattering loss. It deposits a low hydrogen content weld metal. Excellent impact strength at low temperature (-46 °C).

Suitable for unalloyed steels with low purity or higher carbon content, <0.4%C, and for buffer layers. Very low hydrogen content after re-drying. Material to be welded EN 10025-3: S(P) 235-S(P) 420; GP240- GP 280; L245-L360.

Easy slag removal. Excellent Mechanical Properties. Deposit free from porosity, excellent slag detachability. Hydrogen < 5mlH₂/100g deposited weld metal. Efficiency 120%.



Classification

EN ISO	2560-A: E 42 5 B 42 H5
AWS	A5.1: E 7018-1 H4

Approvals

ABS	BV	DB	DNV	GL	LRS	RINA
3YH5	3YH5	●	4YH5	3YH5	4YmH5	4YH5



Chemical analysis (Typical values in %)

	C	Mn	Si	P	S
All weld metal	0.07	1.1	0.4	≤ 0.020	≤ 0.020

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (N/mm ²)	Tensile Strength (N/mm ²)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				-40 °C	-50 °C
As Welded	≥ 430	≥ 520	≥ 22	≥ 70	≥ 47

Materials

S(P)235-S(P)420; GP240-GP280; L245-L360

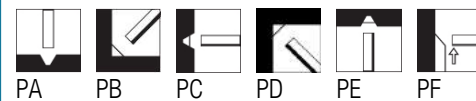
Storage

Keep dry and avoid condensation.

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

Current condition and welding position

DC+



Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weightn(kg/1000)	CBOX		VPMD	
				PC	Code	PC	Code
2.5	300	190-250	18.9	185	●		
2.5	350	65-90	22.16	185	●	90	●
3.2	350	100-140	35.2	120	●	55	●
3.2	450	100-140	45.83	120	●	55	●
4.0	450	140-190	68.24	85	●	40	●
5.0	450	190-250	100.5	55	●	25	●

SAFER PRESTIGE is a basic coated low hydrogen MMA electrode with a very thin coating to improve joint access when root pass welding. The principal applications are related to the all positional welding of steels to BS 4360-50D or equivalent. Designed for pipe welding in position. The main applications are in the following industries, offshore oil and gas, petrochemical and power engineering. Efficiency 100%.

Low hydrogen electrode for all-position offshore welding and for bottom chamfer passes. Excellent C.O.D. test results.

Classification	
EN ISO	2560-A: E 42 5 B 12 H5
AWS	A5.1: E 7016-1 H4
GOST	9467-75:50A-E51 6

Approvals			
ABS	BV	DNV	GL
4YH5	3YHHH	4Y40H5	3YH10

CE

Chemical analysis (Typical values in %)

	C	Mn	Si	P	S
All weld metal	0.06	1.2	0.5	≤ 0.02	≤ 0.02

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (N/mm ²)	Tensile Strength (N/mm ²)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-50 °C
As Welded	≥ 420	500-640	≥ 22	≥ 110
620 °C x 1h	≥ 390	500-620	≥ 22	≥ 110

Materials

S(P)235-S(P)420, GP240-GP280

Storage

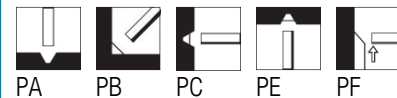
Keep dry and avoid condensation.

HD ≤ 5 ml/100g: Re-dry at 400-420 °C for 1 hour, 5 times max.

HD ≤ 10 ml/100g: Re-dry at 350-370 °C for 1 hour, 5 times max.

Current condition and welding position

AC; DC-; DC+



Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weightn(kg/1000)	CBOX		VPMD	
				PC	Code	PC	Code
2.0	300	60-75	10.5	320	●	170	●
2.5	350	60-90	19.5	215	●	110	●
3.2	350	80-130	31.2	140	●	65	●
3.2	450	80-120	39.8	140	●	65	●
4.0	350	125-170	46.1	90	●	45	●
4.0	450	125-170	58.4	95	●	45	●
5.0	450	170-240	89.11	60	●	30	●