

PREMIERWELD® M12K

Key Features:

- PREMIERWELD® M12K is a low carbon, medium manganese, and low silicon general purpose submerged arc electrode. It's a good choice for a wide range of application with single or multiple pass welding combining with active flux such as PREMIERWELD® NF-3 & JF-N & neutral flux such as PREMIERWELD® BF-1 & JF-B, PREMIERWELD® NF-3. It is also well-suited to use with various Lincolnweld® flux.

Typical Applications:

- Pressure Vessel, Bridge Construction, Shipbuilding, Steel Structure

Recommended Fluxes:

- PREMIERWELD® BF-1, JF-B, PREMIERWELD® NF-3, PREMIERWELD® 761, PREMIERWELD® 780, PREMIERWELD® 860, PREMIERWELD® 960, PREMIERWELD® 8500

Conformance:

- ASME SFA-5.17 AWS A5.17: EM12K

Welding Positions:

- Horizontal & Flat welding

Chemical Composition -- Solid Wire (Wt %), Typical

Wire	C	Mn	Si	P	S	Cu
Requirements - AWS EM12K	0.05-0.15	0.80-1.25	0.10-0.35	≤0.030	≤0.030	≤0.35
PREMIERWELD® M12K	0.09	1.02	0.28	0.01	0.01	0.08

Mechanical Properties -- All Weld Metal, Typical

Wire / Flux	Condition	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation(%)	CVN Impact (J) @ -29°C	Classification
PREMIERWELD® M12K/ PREMIERWELD® NF-3	As-welded	440	535	31	70	AWS:F7A2-EM12K
PREMIERWELD® M12K/ PREMIERWELD® BF-1	As-welded	420	520	28	120	AWS:F7A2-EM12K

Recommended Welding Parameters (DC+, AC)

Diameter (mm)	2.0	2.4	3.2	4.0	4.8
Current Range (A)	300-400	350-450	425-525	475-575	525-625
Voltage (V)	26-29	27-30	27-30	27-30	27-30
ESO (mm)	13-19	19-32	25-38	25-38	25-38
Travel Speed (mm/s)	5-6	5.5-6.5	6-7	6.5-7.5	6.5-7.5

The product performance data of this brochure and related attachments are from LINCOLN ELECTRIC application engineering laboratory.

Except for special instructions, experiments on welding machines are conducted in accordance with the general standard of IEC60974-1; experiments on welding consumables are conducted in accordance with the general standard of AWS; for specific applicable standards on welding consumables please refer to the product page.

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