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