

PROWELD 4112 *For Mild Steel*

Classification

AWS A 5.1 : E6013
JIS Z 3211 : E4313

Approvals

ABS, BV, DNV, LR, TIS

Applications

Welding of mild steel sheet for ships, rolling-stocks, structures, and finished welding of heavy structural works.

Characteristics

PROWELD 4112 is a high rutile type electrode for all positions welding and assures easy operation even in vertical downward position. Spatters are less and bead appearance is beautiful. Shallow penetration minimizes distortion in the welding of thin plates.

Typical Chemical Composition of Deposited Metal (%)

	C	Si	Mn	P	S
E6013 Requirement	≤0.20	≤1.00	≤1.20	Not specified	Not specified
Typical result	0.08	0.33	0.42	0.014	0.013

Typical Mechanical Properties of Deposited Metal

	Tensile Strength N/mm ² (kgf/mm ²)	Yield Strength N/mm ² (kgf/mm ²)	Elongation %	Charpy 2V-notch at 0°C, J (kgf.m)
E6013 Requirement	≥430 (42)	≥330 (34)	≥17	Not specified
Typical result	510 (52)	460 (47)	28	60 (6.1)

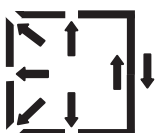
Sizes & Recommended Current Range (AC or DC ±)

Diameter/ Length (mm)	2.0/300	2.6/350	3.2/350	4.0/400	5.0/400
Welding Position	Current (A)				
F	30~70	50~100	60~130	110~170	150~220
V-down	30~70	50~100	60~130	110~170	150~220
V, OH	30~70	50~100	60~130	100~150	130~190

Guideline in Usage

1. Use dry electrodes only.
2. If coating flux absorbs excessive moisture, arc and slag fluidity become unstable, spatters increase, undercuts and blowholes are apt to occur. Damp electrodes should be re-dried at 70~120°C for 60 minutes.
3. For inclined and vertical downward positions, touch electrode tip lightly to the base metal and deposit a stringer bead with electrode slope 40~80° .

Welding Positions



All positions