

# E-10

AWS A5.1 E6019  
EN ISO 2560-B-E4319 A  
JIS Z 3211 E4319

## Characteristics and applications:

E-10 is an ilmenite type electrode and can be used in all-position welding. It has excellent mechanical properties and X-Ray performance, stable arc, and good weldability. The weld bead is good with deep penetration and hardly causes slag inclusion. The weld metal can meet the elongation request of 22% min. Its features allows the product to be applied to important structural objects such as ship body, boiler, vehicle frame, oil tank, steel frame and suitable for structural steels, steel strip, thin steel plate, fabrication steels which thickness is on or below 25 mm.

## Notes on usage:

1. Be sure to clean up the contamination on the base metal to reduce the cause of welding defect.
2. It is highly recommended to dry the electrodes at 80-100°C for 30-60 minutes before using.
3. Apply proper currents to prevent X-Ray and mechanical properties from being worse.
4. When you weld with weave method, the moving range should not exceed 3 times the wire dia.

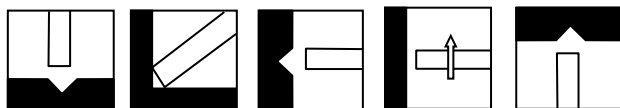
## Typical chemical composition of all weld metal (wt%):

	C	Mn	Si	P	S
AWS	≤0.20	≤1.20	≤1.00	-	-
EN ISO	≤0.20	≤1.20	≤1.00	-	-
Typical value	0.095	0.45	0.08	0.02	0.015

## Typical mechanical properties of all weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -20°C (0°F)
AWS	≥ 330(48)	≥ 430(60)	≥ 22	≥ 27(20)
EN ISO	≥ 330(48)	≥ 430(60)	≥ 22	≥ 27(20)
Typical value	430(62)	490 (71)	27	50(37)

## Welding position:



## Sizes and recommended current range (AC or DC <+>):

Diameter (mm)	2.6	3.2	4.0	5.0
Length (mm)	350	350	450	450
Amps	F	50-100	80-140	130-180
	V&OH	40-70	60-120	110-160

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