

# R-13

HIGH TITANIA TYPE

AWS A5.1 E6013  
EN ISO 2560-B-E4313 A  
JIS Z 3211 E4313

## Characteristics and Applications:

R-13 is designed for high efficiency welding with thin flux coating. It features good slag release, shallow penetration, less spatters, and smooth bead appearance. It is suitable for welding application of vehicles, steel sheets and other light structures.

## Notes on usage:

1. Proper current range and available with AC or DC welding.
2. Dry the electrode at 80-100°C for 30~60 minutes.
3. Clean up the contaminations on the base metal to reduce the cause of welding defect.
4. Apply proper currents for good X-Ray and mechanical properties.

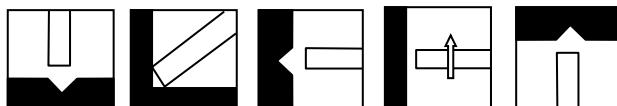
## Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Ni	Cr	Mo	V
AWS	≤0.20	≤1.20	≤1.00	-	-	≤0.30	≤0.20	≤0.30	≤0.08
EN ISO	≤0.20	≤1.20	≤1.00	-	-	≤0.30	≤0.20	≤0.30	≤0.08
Typical value	0.07	0.28	0.23	0.019	0.01	0.011	0.013	0.003	0.007

## Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) 0°C (32°F)
AWS	≥330(48)	≥430(60)	≥17	-
EN ISO	≥330(48)	≥430(60)	≥16	-
Typical value	450(65)	520(75)	25	49(36)

## Welding position:



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

Diameter (mm)		1.6	2.0	2.6	3.2	4.0	5.0
Length (mm)		300	300	350	350	450	450
Amps	F	20-50	30-60	60-90	90-130	110-180	160-220
	V&OH	20-40	30-55	50-80	80-100	110-150	140-200

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