



Manufacturers of Custom Welding Lines for Resale  
www.selectrode.com

**SELECTRODE**  
**1135**  
Vertical Down 312 (29/9)  
Electrode

**INTERNATIONAL CLASSIFICATIONS**

AWS/ASME A 5.4 E 312-16  
DIN 8556: E29 9 R 23  
BS 2926 - 1984 29.9R

EN 1600: E29.9 R 23  
ISO 3581 E29.9 R 23

**FEATURES & APPLICATIONS**

Due to exceptional strength and crack resistance, it is ideal for repairing tools, dies, spring steel and any dissimilar metal combinations, except for the aluminum and copper alloys. It is also recommended for repairing worn parts and as an underlay for hardfacing.

Special vertical position high strength electrode for dissimilar steels

- Unique "Fast-Freeze" coating simplifies vertical down and up welding.
- Ideal for poor fit up joints in all positions.
- Controlled weld puddle allows for filling holes and joining dissimilar steels.

**ALL WELD METAL ANALYSIS (TYPICAL WEIGHT %)**

**Microstructure:** A duplex austenite/ferrite structure with about 40% ferrite.

**Flux Color:** White

Cu	C	Mn	Cr	Si	S	Ni	P	Mo	Fe
.06	.1	.8	30	1	.01	10	.02	1.2	bal

## TYPICAL MECHANICAL PROPERTIES

<b>Undiluted Weld Metal</b>	<b>Maximum Value Up to:</b>
Tensile strength as welded	128,000 psi (880 MPa)
Work hardened	186,000 psi (1280 MPa)
Yield strength	90,000 psi (630 MPa)
Elongation	32%
Reduction of area	25%
Impact Energy	50J: 68°F (20°C)
Hardness	Rockwell B-97 Brinell 320

## WELDING CURRENT & INSTRUCTIONS

**Recommended Current:** DC reverse polarity (Electrode +) or AC

Diameter (MM)	5/64 (2.0)	3/32 (2.5)	1/8 (3.25)
Minimum Amperage	35	35	60
Maximum Amperage	55	70	110

**Welding Techniques:** The area in which the weld is to be made should be free of rust, grease, paint and other materials which cause weld contamination. Maintain a sharp upward electrode angle while welding either vertical, up, or down.

**Welding Positions:** Flat, Horizontal, Vertical up, Overhead

**Deposition Rates:**

Diameter (mm)	Length (mm)	Weldmetal/ Electrode	Electrodes per lb (kg) of Weldmetal	Arc Time of Deposition min/lb (kg)	Amperage Settings	Recovery Rate
5/64 (2.0)	12" (300)	.14oz (4g)	114 (251)	36 (102)	40	100%
3/32 (2.5)	12" (300)	.38oz (9g)	40 (88)	37 (82)	65	100%
1/8 (3.25)	12"(300)	.64oz (18g)	25 (55)	26 (58)	100	100%

## APPROXIMATE ELECTRODE PACKAGING & DIMENSIONS

Diameter (mm)	5/64 (2.0)	3/32 (2.5)	1/8 (3.25)
Length (mm)	12" (300)	12" (300)	12" (300)
Electrodes / lb	42	30	18
Electrodes / kg	92	67	40