



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

EN 1600: E29.9 R 23

DIN 8556: E29 9 R 23

ISO 3581 E29.9 R 23

BS 2926 - 1984 29.9R

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

| | |
|-----------------------------|-----------------------------|
| Undiluted Weld Metal | Maximum Value Up to: |
| 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 |