

Select 730

Description:

Select 730 is an all position, flux cored, gas shielded electrode designed for single or multiple pass welding of carbon and certain low alloy steels. This electrode is intended for use with 100% CO₂ or 75-80% Ar/balance CO₂ shielding gas. Mechanical properties are excellent with either gas, and CVN impact values are particularly good, at temperatures as low as -20°F. This product is optimized for superb arc transfer characteristics with 75-80% Ar/Balance CO₂ shielding gas, but may also be used with 100% CO₂, with the transfer mode being small droplets and resembling the molten metal spraying onto the welding puddle. The **Select 730** is well suited for structural steel welding, shipbuilding, barge construction, and general plate fabrication.

Classifications & Approvals:

- E71T-1C-H8, E71T-1M-H8, E71T-9C-H8, E71T-9M-H8 per AWS A5.20
- E71T1-M21A2-CS2-H8 and E71T1-C1A2-CS1-H8 per AWS A5.36
- ABS 3SA-3YSA, DNV III YMS (100% CO₂ and 75-80% Ar/Balance CO₂)
- AWS D1.8:2016 .052" and 1/16" (100% CO₂ and 75-80% Ar/Balance CO₂)

Advantages:

- Excellent notch toughness using 100%CO₂ or 75-80%Ar/Balance CO₂
- Low fume generation rates and minimal spatter emission
- Excellent bead geometry and all-position weldability
- Smooth spray transfer mode

Typical Mechanical Properties:

| | 100CO ₂ | 75Ar/25CO ₂ |
|---------------------------------|--------------------|------------------------|
| Ultimate Tensile Strength (psi) | 83,500 | 92,500 |
| Yield Strength (psi) | 74,500 | 86,500 |
| Percentage Elongation | 30 | 28 |
| CVN (ft-lbf) @ 0° F | 108 | 110 |
| @ -20° F | 89 | 88 |

Typical Weld Deposit Composition (wt%):

| Shielding Gas | C | Mn | P | S | Si |
|----------------------------------|-----|------|------|------|-----|
| 100%CO ₂ | .04 | 1.25 | .008 | .010 | .63 |
| 75-80%Ar/Balance CO ₂ | .05 | 1.50 | .008 | .009 | .78 |

Recommended Welding Parameters (CO₂*):

| Diameter | Position | WFS | Optimum | | Range | | CTWD |
|----------|----------|-----|----------|---------|----------|---------|--------|
| | | | Amperage | Voltage | Amperage | Voltage | |
| 1/16" | Flat | 350 | 350 | 28 | 150-400 | 22-33 | 1-1 ¼" |
| | V-Up/OH | 225 | 180 | 25 | 150-310 | 22-28 | |
| .052" | Flat | 440 | 300 | 27 | 100-330 | 19-31 | 1-1 ¼" |
| | V-Up/OH | 245 | 200 | 25 | 150-310 | 21-28 | |
| .045" | Flat | 450 | 250 | 27 | 100-300 | 21-31 | ¾"-1" |
| | V-Up/OH | 305 | 190 | 25 | 150-280 | 21-29 | |

*For 75-80%Ar/Balance CO₂ shielding gas, decrease voltage by 1 to 1.5 volts

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Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.