

Select 70C-LMn

Carbon Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- Designed for single or multiple pass welding on steels requiring a minimum of 70,000 psi tensile strength.
- Designed to produce cleaner weld deposits than conventional metal cored electrodes, thus allowing for minimal slag islands and the ability to deposit multiple beads without cleaup between passes.
- Arc transfer is a stable, fine droplet spray.
- Total manganese (Mn) content is significantly reduced compared to standard E70C-6 or E70S-6 AWS classed electrodes.
- Ideal for welding structural steel, thin plate fabrication, general fabrication, and welding of thin-walled tanks applications where ASTM A36, A285, A515-Gr 70, and A516-Gr 70 type materials are being used.

CONFORMANCES

| | |
|---------------|--|
| AWS A5.18 | E70C-6M |
| AWS A5.36 | E71T15-GA3-CS1 E71T15-M20A3-CS1 E71T15-M21A3-CS1 |
| ASME SFA 5.18 | E70C-6M |

DIAMETERS (in [mm])

0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

POSITIONS



SHIELDING GAS

75-92% Ar / Balance CO₂
Flow Rate: 40 - 50 CFM

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

| Shielding Gas | C | Cr | Cu | Mn | Mo | Ni | P | S | Si | V |
|----------------------------|------|------|------|------|-------|------|-------|-------|------|-------|
| 75%Ar / 25%CO ₂ | 0.06 | 0.04 | 0.08 | 0.55 | 0.004 | 0.40 | 0.010 | 0.010 | 0.62 | 0.002 |
| 92%Ar / 8%CO ₂ | 0.06 | 0.04 | 0.08 | 0.60 | 0.006 | 0.40 | 0.010 | 0.010 | 0.71 | 0.002 |

TYPICAL MECHANICAL PROPERTIES

| Shielding Gas | Tensile Strength ksi (MPa) | Yield Strength ksi (MPa) | Elongation (%) | Weld Condition | PWHT Temp | CVN @ -20°F (-30°C) ft-lb (J) |
|----------------------------|-------------------------------|-----------------------------|-------------------|-------------------|--------------|-------------------------------------|
| 75%Ar / 25%CO ₂ | 79 (545) | 66 (455) | 26 | As-Welded | - | 61 (83) |
| 92%Ar / 8%CO ₂ | 85 (586) | 71 (490) | 27 | As-Welded | - | 61 (83) |



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Notice: Be sure to follow all your employers safety practices, policies and procedures when using this product. Refer to CSA W117.2 and ANSI Z49.1 Safety in Welding, Cutting and Allied Processes for further information and the manufactures SDS sheet. 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.

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RECOMMENDED WELDING PARAMETERS

| Diameter in (mm) | Shielding Gas | Position | WFS* in/min (m/min) | Amps | Volts | CTWD* in (mm) |
|------------------|----------------|-------------------|---------------------|------|-------|---------------------|
| 0.045 (1.2 mm) | 75% Ar/25% CO2 | Flat & Horizontal | 260 (6.6) | 200 | 25 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 305 (7.7) | 220 | 26 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 360 (9.1) | 240 | 27.5 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 405 (10.3) | 255 | 29 | 5/8 - 3/4 (16 - 19) |
| 0.052 (1.3 mm) | 75% Ar/25% CO2 | Flat & Horizontal | 235 (6.0) | 215 | 25 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 315 (8.0) | 260 | 26 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 330 (8.4) | 275 | 27.5 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 345 (8.8) | 295 | 29 | 3/4 - 1 (19 - 25) |
| 1/16 (1.6 mm) | 75% Ar/25% CO2 | Flat & Horizontal | 200 (5.1) | 250 | 25 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 245 (6.2) | 290 | 26 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 275 (7.0) | 310 | 27.5 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 285 (7.2) | 330 | 29 | 3/4 - 1 (19 - 25) |

* WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance

Welding parameters are for 75% Ar/25% CO2, at higher levels of argon the voltage should be gradually decreased: ½-1 volt for 85% Ar/15% CO2, 1-1 ½ volts for 90% Ar/10% CO2 and 1-2 volts for 92% Ar/8% CO2.

APPROVALS

| Agency | Approval | Shielding Gas | Diameter(s) in (mm) |
|----------------|----------------------|----------------------|--------------------------|
| CWB CSA W48-23 | E491T15-M21A3-CS1-H4 | M21 (75%Ar / 25%CO2) | 0.045 (1.2) - 1/16 (1.6) |
| | E491T15-GA3-CS1-H4 | M14 (Arcal 14) | 0.045 (1.2) - 1/16 (1.6) |
| | | G (Gas Mixture*) | 0.045 (1.2) - 1/16 (1.6) |

* G - Gas mixtures containing components not listed, or mixtures outside the composition range listed in AWS A5.32 (ISO 14175). Two gas mixtures with the same G - classification may not be interchangeable. For more details see approval website or contact Select-Arc.

PACKAGING (lbs [kgs])

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

*Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.

STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.



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