

Select 70C-6

Carbon Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- Tubular construction promotes faster travel speeds and better fusion than solid GMAW electrodes
- High level of deoxidizers enhances welding over hot rolled and rusted plate material
- Intended for welding carbon steels, such as ASTM A36, A515, A516 and A572
- Smaller diameters (1/16" or smaller) can be pulse welded in all positions (call in for parameter recommendations)
- The versatility of a slag free cored wire makes this ideal for general fabrication, structural steel welds, and thin section applications, such as automotive components and hot water heaters

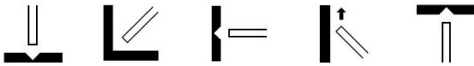
CONFORMANCES

| | |
|----------------------|--|
| AWS A5.18 | E70C-6M-H4 |
| AWS A5.36 | E70T15-M20A2-CS1-H4 E70T15-M21A2-CS1-H4 |
| ASME SFA 5.18 | E70C-6M-H4 |
| AWS D1.8 | 0.045 in (1.2 mm), (75% Ar/25% CO ₂) 0.045 in (1.2 mm), (85% Ar/15% CO ₂) 0.045 in (1.2 mm), (90% Ar/10% CO ₂) 0.052 in (1.3 mm), (85% Ar/15% CO ₂) 0.052 in (1.3 mm), (90% Ar/10% CO ₂) 1/16 in (1.6 mm), (85% Ar/15% CO ₂) 1/16 in (1.6 mm), (90% Ar/10% CO ₂) |

DIAMETERS [in (mm)]

0.035 (0.9), 0.045 (1.2), 0.052 (1.3), 1/16 (1.6), 5/64 (2.0), 3/32 (2.4)

POSITIONS



SHIELDING GAS

75-95%Ar/Balance CO₂
Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY [WT%]

| Shielding Gas | C | Mn | P | S | Si |
|----------------------------|------|------|-------|-------|------|
| 75%Ar / 25%CO ₂ | 0.06 | 1.55 | 0.010 | 0.010 | 0.66 |
| 85%Ar / 15%CO ₂ | 0.05 | 1.62 | 0.012 | 0.008 | 0.83 |
| 92%Ar / 8%CO ₂ | 0.05 | 1.73 | 0.010 | 0.008 | 0.89 |

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 | 87 (601) | 79 (544) | 25 | As-Welded | - | 46 (62) |
| 85%Ar / 15%CO ₂ | 89 (614) | 74 (510) | 28 | As-Welded | - | 21 (28) |
| 92%Ar / 8%CO ₂ | 92 (634) | 78 (538) | 27 | As-Welded | - | 28 (38) |



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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) |
|------------------|----------------|-------------------|---------------------|------|-------|---------------------|
| 0.035 (0.9 mm) | 75% Ar/25% CO2 | Flat & Horizontal | 345 (8.8) | 170 | 25 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 425 (10.8) | 190 | 26 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 475 (12.1) | 210 | 27.5 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 570 (14.5) | 225 | 29 | 5/8 - 3/4 (16 - 19) |
| 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) |
| 5/64 (2.0 mm) | 75% Ar/25% CO2 | Flat & Horizontal | 170 (4.3) | 350 | 25 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 185 (4.7) | 370 | 26 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 210 (5.3) | 400 | 28 | 1 - 1 1/4 (25 - 32) |
| | | Flat & Horizontal | 255 (6.5) | 415 | 29 | 1 - 1 1/4 (25 - 32) |
| 3/32 (2.4 mm) | 75% Ar/25% CO2 | Flat & Horizontal | 125 (3.2) | 370 | 25 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 140 (3.6) | 390 | 26 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 160 (4.1) | 425 | 28 | 1 - 1 1/4 (25 - 32) |
| | | Flat & Horizontal | 185 (4.7) | 450 | 29 | 1 - 1 1/4 (25 - 32) |

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

**The parameters listed are recommended starting points of operation and the ranges for amperage, wfs, and voltage could be extended based on fitness for application. For products with "all-position" capability, as determined and listed in classification, the position recommendation can be determined based on operator skill and material thickness and isn't limited to the listing.

At higher levels of argon the voltage should be gradually decreased; 0.5-1 volt for 85% Ar/15% CO2, 1-1.5 volts for 90% Ar/10% CO2 and 1-2 volts for 95% Ar/5% CO2.

APPROVALS

| Agency | Approval | Shielding Gas | Diameter(s) in (mm) |
|----------------------|----------------------|----------------------|--------------------------|
| ABS | 2YSA | M21 (75%Ar / 25%CO2) | 0.035 (0.9) - 1/16 (1.6) |
| Chrysler MS-90024/01 | W103 | M21 (75%Ar / 25%CO2) | 0.035 (0.9) - 1/16 (1.6) |
| CWB CSA W48-23 | E491T15-C1A3-CS1-H4 | C1 (100%CO2) | 0.035 (0.9) - 1/16 (1.6) |
| | E491T15-M21A3-CS1-H4 | M21 (75%Ar / 25%CO2) | 0.035 (0.9) - 1/16 (1.6) |
| | E491T15-M20A3-CS1-H4 | M20 (92%Ar / 8%CO2) | 0.035 (0.9) - 1/16 (1.6) |
| DNV | II YMS (H5) | M21 (75%Ar / 25%CO2) | 0.035 (0.9) - 1/16 (1.6) |
| LLOYDS | 2YS (H5) | M21 (75%Ar / 25%CO2) | 0.045 (1.2) - 1/16 (1.6) |



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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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