



Technical Specification Sheet

Dynashield® Flux Cored Welding Wire E71T-1

Description

Dynashield 71T-1 is a gas-shielded carbon steel wire for fabrication of mild and low carbon steel; structural and pressure vessel grades. This all-position wire provides optimum welding performance in argon/carbon dioxide shielding gas but is also formulated to perform very well with 100% CO₂. Dynashield flux cored wire is formulated and manufactured to provide consistent chemistry, steady arc, low spatter, and an excellent bead appearance.

Specification Conformance

AWS A5.20, ASME SFA 5.20 E71T-1/1M

Weld Deposit Chemical Composition (%)

| | 100% CO ₂ | 75%Ar/25% CO ₂ |
|------------|----------------------|---------------------------|
| Carbon | 0.04 | 0.04 |
| Manganese | 1.50 | 1.65 |
| Silicon | 0.60 | 0.75 |
| Phosphorus | 0.013 | 0.013 |
| Sulfur | 0.014 | 0.014 |
| Iron | remainder | remainder |

Mechanical Properties – AWS A5.20 Test Procedure

| | 100% CO ₂ | 75% Ar/25% CO ₂ |
|--------------------------------|----------------------|----------------------------|
| Yield Strength psi (MPa) | 79,000 (545) | 85,000 (586) |
| Tensile Strength psi (MPa) | 85,000 (586) | 91,000 (627) |
| Elongation (%) | 28 | 28 |
| Charpy V-Notch ft-lbs (Joules) | | |
| @0°F (-18°C) | 55 (74) | 68 (92) |
| @-20°F (-29°C) | 43 (58) | 52 (70) |

Safety Information

WARNING: PROTECT yourself and others. Read and understand this information.

FUMES AND GASES can be hazardous to your health.

HEAT RAYS (INFRARED RADIATION) from flame or hot metal can injure eyes.

- Before use, read and understand the manufacturer's instructions, Material Safety Data Sheet (MSDS) and your employer's safety practices.
- Keep your head out of fumes.
- Use enough ventilation, exhaust at the flame, or both, to keep fumes and gases from your breathing zone and the general area.
- Wear correct eye, ear, and body protection.
- See American National Standard Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety and Health Standards, available from the U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.

Statement of Liability - Disclaimer

Any suggestion of product applications or results is given without representation or warranty, either expressed or implied. Without exception or limitation, there are no warranties of merchantability or of fitness for particular purpose or application. The user must fully evaluate every process and application in all aspects, including suitability, compliance with applicable law and non-infringement of the rights of others. Harris Products Group and its affiliates shall have no liability in respect thereof.



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Diffusible Hydrogen

| Shielding Gas | Typical results (ml/100g weld deposit) |
|------------------------|--|
| 100% CO ₂ | <10 |
| 75Ar/25CO ₂ | <10 |

Typical Operating Procedures

| Wire Polarity Electrical Stickout Wire Weight | Wire Feed Speed in/min (m/min) | Arc Voltage (volts) | Approx. Current (amps) | Melt-Off Rate lbs/hr (kg/hr) | Deposition Rate lbs/hr (kg/hr) | Efficiency (%) |
|---|-----------------------------------|------------------------|---------------------------|---------------------------------|-----------------------------------|----------------|
| .045" DC+ 3/4" (19mm) .370 lbs/1000" | 175 (4.4) | 22 - 24 | 130 | 3.9 (1.8) | 3.2 (1.4) | 82 |
| | 250 (6.4) | 24 - 26 | 165 | 5.6 (2.5) | 4.7 (2.1) | 84 |
| | 300 (7.6) | 25 - 27 | 190 | 6.7 (3.0) | 5.7 (2.6) | 85 |
| | 350 (8.9) | 26 - 28 | 210 | 7.8 (3.5) | 6.6 (3.0) | 85 |
| | 400 (10.2) | 27 - 29 | 230 | 8.9 (4.0) | 7.7 (3.5) | 86 |
| | 525 (13.3) | 29 - 31 | 275 | 11.7 (5.3) | 10.1 (4.6) | 86 |
| .052" DC+ 3/4" (19mm) .467 lbs/1000" | 150 (3.8) | 21 - 23 | 145 | 4.2 (1.9) | 3.7 (1.7) | 88 |
| | 200 (5.1) | 22 - 24 | 185 | 5.6 (2.5) | 4.9 (2.2) | 88 |
| | 250 (6.4) | 24 - 26 | 215 | 7.0 (3.2) | 6.1 (2.8) | 87 |
| | 300 (7.6) | 25 - 27 | 245 | 8.4 (3.8) | 7.3 (3.3) | 87 |
| | 350 (8.9) | 26 - 28 | 270 | 9.8 (4.4) | 8.5 (3.9) | 87 |
| | 425 (10.8) | 28 - 30 | 295 | 11.9 (5.4) | 10.4 (4.7) | 87 |
| 1/16" DC+ 3/4" (19mm) .722 lbs/1000" | 125 (3.2) | 22 - 24 | 170 | 5.4 (2.4) | 4.6 (2.1) | 85 |
| | 150 (3.8) | 22 - 24 | 190 | 6.5 (2.9) | 5.5 (2.5) | 85 |
| | 200 (5.1) | 23 - 25 | 235 | 8.7 (3.9) | 7.3 (3.3) | 85 |
| | 250 (6.4) | 24 - 26 | 275 | 10.8 (4.9) | 9.2 (4.2) | 85 |
| | 300 (7.6) | 26 - 28 | 310 | 13.0 (5.9) | 11.0 (5.0) | 85 |
| | 375 (9.5) | 28 - 30 | 365 | 16.2 (7.4) | 13.8 (6.3) | 85 |

Above data was determined using 100% CO₂. Use lower voltages when using Ar/CO₂ blends.

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