

SelectAlloy 317LSi-C

Stainless Steel / Gas Shielded / Metal Cored

PRODUCT DATA SHEET

FEATURES

- The addition of molybdenum (Mo) improves resistance to pitting and crevice corrosion compared to even type 316 alloy due to the nominal ~1 % increase (Mo).
- Increased silicon (Si) content compared to standard grades of the same alloy composition improves bead wetting and arc stability.
- Low carbon (C), < 0.03 wt%, minimizes carbide precipitation (sensitization) which makes the weld metal more resistant to intergranular corrosion.
- Metal cored construction inherently provides better welding performance compared to solid wires of equal or similar AWS classification; benefits include ability to successfully bridge gaps when part fit up is not as designed, higher travel speeds can be achieved with subsequent lower heat inputs at equal amperages, and ability to join thin materials.
- Applications for this alloy type include welding components of similar composition or multilayer cladding applications in severely corrosive environments.

CONFORMANCES

AWS A5.22

ECG

ASME SFA 5.22

ECG

DIAMETERS (in [mm])

0.035 (0.9), 0.045 (1.2), 1/16 (1.6)

POSITIONS



SHIELDING GAS

Ar + 0.5-5% CO₂, Ar + 0.5-3% O₂

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY [WT%]

| Shielding Gas | C | Cr | Cu | Mn | Mo | Ni | P | S | Si |
|--------------------------|----------------|-------|------|------|------|-------|-------|-------|------|
| 98%Ar / 2%O ₂ | 0.03 | 19.50 | 0.17 | 1.45 | 3.33 | 13.90 | 0.020 | 0.004 | 0.77 |
| Ferrite WRC 1992 | Result 8 FN | | | | | | | | |

TYPICAL MECHANICAL PROPERTIES

| Shielding Gas | Tensile Strength ksi (MPa) | Yield Strength ksi (MPa) | Elongation (%) | Weld Condition | PWHT Temp |
|--------------------------|-------------------------------|-----------------------------|----------------|----------------|-----------|
| 98%Ar / 2%O ₂ | 90 (621) | 70 (483) | 35 | As-Welded | - |



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.

RECOMMENDED WELDING PARAMETERS **

| Diameter in (mm) | Shielding Gas | Position | WFS* in/min (m/min) | Amps | Volts | CTWD* in (mm) |
|------------------|--------------------------|-------------------|---------------------|------|-------|---------------------|
| 0.035 (0.9 mm) | 98% Ar/2% O ₂ | Flat & Horizontal | 450 (11.4) | 170 | 21 | 1/2 (13) |
| | | Flat & Horizontal | 515 (13.1) | 185 | 23 | 1/2 (13) |
| | | Flat & Horizontal | 560 (14.2) | 200 | 24 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 655 (16.6) | 205 | 26 | 1/2 - 5/8 (13 - 16) |
| 0.045 (1.2 mm) | 98% Ar/2% O ₂ | Flat & Horizontal | 325 (8.3) | 220 | 22 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 375 (9.5) | 235 | 23 | 1/2 - 5/8 (13 - 16) |
| | | Flat & Horizontal | 420 (10.7) | 250 | 24 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 500 (12.7) | 270 | 26 | 5/8 - 3/4 (16 - 19) |
| 1/16 (1.6 mm) | 98% Ar/2% O ₂ | Flat & Horizontal | 225 (5.7) | 265 | 21 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 300 (7.6) | 305 | 23 | 5/8 - 3/4 (16 - 19) |
| | | Flat & Horizontal | 330 (8.4) | 335 | 24 | 3/4 - 1 (19 - 25) |
| | | Flat & Horizontal | 375 (9.5) | 350 | 26 | 3/4 - 1 (19 - 25) |

* 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.

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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