

# SelectAlloy 317L-AP BF

Stainless Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

## FEATURES

- Low C, < 0.04 wt%, minimizes carbide precipitation (sensitization) which makes the weld metal more resistant to intergranular corrosion.
- The addition of Mo improves resistance to pitting and crevice corrosion compared to type 308 stainless steel with increased resistance compared to type 316 due to the nominal ~1 % increase (Mo).
- Designed for welding in all positions where well washed beads can be achieved with minimal weaving in both 100% CO<sub>2</sub> or 75-80% Ar/balance CO<sub>2</sub> shielding gas
- Smooth arc transfer produces minimal spatter.
- Applications for this alloy type include welding components of similar composition or multilayer classing applications in severely corrosive environments, where crevice and pitting corrosion are of concern.

## CONFORMANCES

AWS A5.22

E317LT1-1

E317LT1-4

ASME SFA 5.22

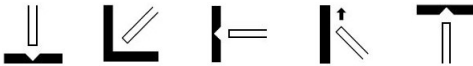
E317LT1-1

E317LT1-4

## DIAMETERS (in [mm])

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

## POSITIONS



## SHIELDING GAS

75-80% Ar + Balance CO<sub>2</sub>, 100% CO<sub>2</sub>

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   | WRC-1992 Ferrite |
|----------------------------|------|-------|------|------|------|-------|------|------|------|------------------|
| 100%CO <sub>2</sub>        | 0.03 | 19.30 | 0.18 | 0.83 | 3.45 | 12.30 | 0.02 | 0.01 | 0.75 | 12               |
| 75%Ar / 25%CO <sub>2</sub> | 0.03 | 19.40 | 0.17 | 0.87 | 3.46 | 12.40 | 0.02 | 0.01 | 0.81 | 13               |

Bismuth is not intentionally added and levels are not known to be greater than 0.002 (WT%)

## TYPICAL MECHANICAL PROPERTIES

| Shielding Gas              | Tensile Strength<br>ksi (MPa) | Yield Strength<br>ksi (MPa) | Elongation<br>(%) | Weld<br>Condition | PWHT<br>Temp |
|----------------------------|-------------------------------|-----------------------------|-------------------|-------------------|--------------|
| 100%CO <sub>2</sub>        | 91 (628)                      | 65 (448)                    | 35                | As-Welded         | -            |
| 75%Ar / 25%CO <sub>2</sub> | 94 (648)                      | 67 (462)                    | 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)   | 75% Ar/25% CO2 | All Positions     | 325 (8.3)           | 110  | 23    | 1/2 (13)            |
|                  |                | All Positions     | 400 (10.2)          | 120  | 24.5  | 1/2 (13)            |
|                  |                | All Positions     | 470 (11.9)          | 130  | 26    | 1/2 (13)            |
|                  |                | Flat & Horizontal | 565 (14.4)          | 145  | 27.5  | 1/2 - 5/8 (13 - 16) |
|                  |                | Flat & Horizontal | 660 (16.8)          | 160  | 29    | 1/2 - 5/8 (13 - 16) |
| 0.045 (1.2 mm)   | 75% Ar/25% CO2 | All Positions     | 215 (5.5)           | 130  | 23    | 1/2 - 5/8 (13 - 16) |
|                  |                | All Positions     | 260 (6.6)           | 145  | 24.5  | 1/2 - 5/8 (13 - 16) |
|                  |                | All Positions     | 310 (7.9)           | 160  | 26    | 1/2 - 5/8 (13 - 16) |
|                  |                | Flat & Horizontal | 420 (10.7)          | 180  | 27.5  | 5/8 - 3/4 (16 - 19) |
|                  |                | Flat & Horizontal | 450 (11.4)          | 200  | 29    | 5/8 - 3/4 (16 - 19) |
| 1/16 (1.6 mm)    | 75% Ar/25% CO2 | All Positions     | 135 (3.4)           | 160  | 23    | 5/8 - 3/4 (16 - 19) |
|                  |                | All Positions     | 190 (4.8)           | 195  | 24.5  | 5/8 - 3/4 (16 - 19) |
|                  |                | All Positions     | 225 (5.7)           | 210  | 26    | 5/8 - 3/4 (16 - 19) |
|                  |                | Flat & Horizontal | 255 (6.5)           | 225  | 27.5  | 3/4 - 1 (19 - 25)   |
|                  |                | Flat & Horizontal | 290 (7.4)           | 245  | 29    | 3/4 - 1 (19 - 25)   |

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

Parameters were established in 75% Ar/25% CO2. Raise by 1-1.5 volts when using 100% CO2.

## 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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