



!!!! WARNING !!!!



WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.

BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND MATERIAL SAFETY DATA SHEET (MSDS).

THE MATERIAL SAFETY DATA SHEET (MSDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE MSDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.

DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET (MSDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE MSDS.

SEE THE PRODUCT WARNING LABEL AND MSDS FOR COMPLETE WARNING INFORMATION.



CROWN ALLOYS COMPANY

30105 STEPHENSON HWY.
MADISON HEIGHTS, MI. 48071
(248) 588-3790 • (800) 521-7878

Crown E 316LT-1 FCo

Flux Cored Arc Welding (FCAW) for Stainless Steel

Description and Special Characteristics:

Crown E316LT-1 FCo is an all-position gas-shielded flux cored stainless steel electrode for flux cored arc welding (FCAW). The **E316LT-1 FCo** will produce high quality weldments in all positions of welding. It is used for welding type 316 and 316L stainless. It is also used to weld CF-8M and CF-3M stainless castings. The addition of molybdenum provides much greater corrosion resistance to sulphuric and sulphurous acids, chlorides and cellulose solutions than the 308 stainless. Both deposition rate and efficiency are better than that of covered stainless steel electrodes. Compared to the solid GMAW (MIG) process, **Crown E316LT-1 FCo** achieves all-position capability without using a pulsed power source or short circuit transfer. The **E316LT-1 FCo** will attain a higher deposition rate and better weld quality than GMAW (MIG) welding with solid wire. The weld deposits exhibit superior radiographic quality.

Specifications:

AWS A5.22
E 316LT1-1/T1-4

Typical Mechanical Properties:

➤ Tensile Strength	89,200 psi
➤ Yield Strength	69,000 psi
➤ Elongation	36%

Procedure:

Feed rolls of common configurations (knurled, U-grooved, or flat and V-grooved combination) can be used, but feed roll pressures should not exceed a firm finger-tight setting. A properly sized nylon or teflon cable liner will promote optimum wire feeding. The wire must be carefully cut to insure roundness before attempting to feed it through a contact tip. The welded bead should have essentially no ripple. This smooth, unrippled appearance is characteristic of weld beads produced by the **E316LT-1 FCo**. Welding must be done using a constant voltage (CV) DC machine. If used on a constant current (CC) machine, any small changes in electrical stickout (length of wire from the end of the contact tip to the workpiece) will produce large voltage fluctuations, resulting in stubbing and porosity. Weld in the DC reverse polarity position. Electrode extension or stick out should be 1/2" to 1". The optimum range is from 5/8" to 3/4". Slag inclusions are best avoided by using backhand welding technique. **The optimum shielding gas is 100% CO₂. Pure CO₂ provides more resistance to worm tracks than does an Argon-CO₂ blend. Spatter can be reduced slightly by using a 75% Argon/25% CO₂ shielding gas. See welding parameters on the next page.**

Sizes:

.035 }
.045 } All sizes are available in 2# and 8" and 30# spools.
1/16 }

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Typical Welding Parameters

Shielding Gas 100% CO ₂	.035 Wire Diameter			
Amps	100	120	140	170
Volts	23	23	25	26
Wire Feed Speed (in/min)	265	315	405	530
Deposition Rate (lbs/hr)	2.9	3.4	4.6	5.7
% Efficiency	83.9	81.4	82.6	81.8

When using a 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts

Shielding Gas 100% CO ₂	.045 Wire Diameter			
Amps	130	165	190	220
Volts	25	26	28	30
Wire Feed Speed (in/min)	227	341	445	567
Deposition Rate (lbs/hr)	4.25	6.14	8.08	10.24
% Efficiency	84.0	83.0	84.0	84.0

When using a 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

When welding in the flat or horizontal position use 180-200amps, 25-27volts, 450in/min

When welding in the vertical-up position use 150-170amps, 24-26volts, 325in/min

When welding in the overhead position use 175-195amps, 25-27volts, 425in/min

Shielding Gas 100% CO ₂	1/16 Wire Diameter			
Amps	170	210	250	300
Volts	25	27	28	29
Wire Feed Speed (in/min)	154	193	243	321
Deposition Rate (lbs/hr)	5.34	6.89	8.57	11.43
% Efficiency	83.0	82.5	83.0	83.0

When using a 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

When welding in the flat or horizontal position use 180-200amps, 25-27volts, 450in/min

When welding in the vertical-up position use 150-170amps, 24-26volts, 325in/min

When welding in the overhead position use 175-195amps, 25-27volts, 425in/min

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Crown E 316LT-1 FL

Flux Cored Arc Welding (FCAW) for Stainless Steel

Description and Special Characteristics:

Crown E316LT-1 FL is a gas-shielded flux cored stainless steel electrode for flux cored arc welding (FCAW). It was developed for flat and horizontal position welding. The smooth weld metal transfer and easy slag removal eliminates unnecessary cleanup. The flat weld beads minimize over-welding while producing a fine appearance. The balance of the **description** and of the **procedure** are essentially the same as E316LT-1 FCo. However, the typical welding parameters (see below) will differ slightly.

Sizes:

.045 } All sizes are available in 2# and 8" and 30# spools.
1/16 }

Typical Welding Parameters

Shielding Gas 100% CO ₂	.045 Wire Diameter		
Amps	150	200	300
Volts	25	29	33
Wire Feed Speed (in/min)	259	410	860
Deposition Rate (lbs/hr)	5.0	7.7	16.9
% Efficiency	83.9	84.2	87.0

Shielding Gas 100% CO ₂	1/16 Wire Diameter		
Amps	200	240	400
Volts	25	28	33
Wire Feed Speed (in/min)	172	225	495
Deposition Rate (lbs/hr)	6.7	8.1	18.9
% Efficiency	83.6	83.6	85.5