

STAINLESS STEEL OPEN-ARC FLUX-CORED WIRES

Fabshield® 308L-0

FLAT & HORIZONTAL

AWS E308LT0-3

An austenitic stainless steel deposit that can be used for joining common austenitic stainless steels such as Types 304, 304L, 321, CF-8, and CF-3. It provides good resistance to intergranular corrosion. It can also be used as an intermediate layer for hardfacing.

Typical Deposit Analysis %

Carbon	0.03
Manganese	1.10
Silicon	0.44
Chromium	20.20
Nickel	9.80
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	94,000 (648 MPa)
Yield Strength (psi)	70,000 (483 MPa)
Elongation in 2"	40%
DeLong Ferrite Number	8

Diameters 1/16", 3/32"

Approvals and conformance:

- AWS Spec A5.22
- ASME SFA5.22 (F-6, A-8)

Fabshield® 309L-0

FLAT & HORIZONTAL

AWS E309LT0-3

An austenitic stainless steel deposit used for joining common austenitic stainless steels such as Types 304, 304L, 309, and 309L. It is often used for overlaying carbon steel and low alloy steel, as well as for joining stainless steel to carbon or low alloy steel.

Typical Deposit Analysis %

Carbon	0.03
Manganese	1.73
Silicon	0.58
Chromium	23.10
Nickel	12.90
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	91,000 (627 MPa)
Yield Strength (psi)	70,000 (483 MPa)
Elongation in 2"	40%
DeLong Ferrite Number	11

Diameters 1/16", 3/32"

Approvals and conformance:

- AWS Spec A5.22
- ASME SFA5.22 (F-6, A-8)

GAS SHIELDED STAINLESS STEEL FLUX-CORED WIRES

FabCO® 410NiMoT1

ALL POSITION

AWS E410NiMoT1-4/-1

A low carbon martensitic stainless steel deposit used for joining Type CA-6NM stainless steel castings as well as for joining Types 409, 410, 410S, and 405 stainless steels. The 410NiMoT1 has been tested to and has met hardness requirements set forth by NACE MR0175-95, with a PWHT procedure.

Typical Deposit Analysis %

Carbon	0.03
Manganese	0.30
Silicon	0.38
Chromium	11.50

Typical Weld Metal Properties

(Heat Treated for 1 hr. @ 1150°F):

Tensile Strength (psi)	131,000 (903 MPa)
Yield Strength (psi)	111,000 (765 MPa)
Elongation in 2"	21%

As Welded:

Tensile Strength (psi)	161,900 (1116 MPa)
Yield Strength (psi)	144,900 (999 MPa)
Elongation in 2"	20%
75/25 (Ar/CO ₂) or 100% CO ₂	

Diameters .045", 1/16", 3/32"

Approvals and conformance:

- AWS Spec A5.22
- ASME SFA5.22 (F-6)

Stainless Steel Wires

CHROMAWELD™ STAINLESS STEEL GAS-SHIELDED FLUX-CORED WIRES

ChromaWeld™ 308LT1

ALL POSITION

AWS E308LT1-1/-4

An austenitic stainless steel gas shielded flux-cored wire with low carbon used for joining common austenitic stainless steels such as Types 301, 302, 304 and 304L, CF-8, and CF-3.

Features

- Self-detaching slag
- Spray-like arc transfer
- High moisture resistance

Benefits

- Welds well in vertical (up) position, as well as flat & horizontal
- Excellent welder appeal
- Low spatter and less clean-up
- Good weld soundness & extended shelf-life

Typical Deposit Analysis %

Carbon	0.025
Manganese	1.40
Silicon	0.52
Chromium	19.22
Nickel.....	10.05
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	80,000 (552 MPa)
Yield Strength (psi)	59,000 (407 MPa)
Elongation in 2"	42%
DeLong Ferrite Number	10
75% Ar-25% CO ₂ or 100% CO ₂	

Diameters .045", 1/16"

ChromaWeld™ 309LT1

ALL POSITION

AWS E309LT1-1/-4

An austenitic stainless steel all-position gas shielded flux-cored wire with low carbon used for joining common austenitic stainless steels such as Types 304, 304L, 309 and 309L. It is often used for joining stainless steel to carbon and low alloy steel, as well as for overlying carbon steel and low alloy steel.

Features

- Self-detaching slag
- Spray-like arc transfer
- High moisture resistance

Benefits

- Welds extremely well in vertical (up) position, as well as flat and horizontal
- Excellent welder appeal
- Low spatter and less clean-up
- Good weld soundness & extended shelf-life

Typical Deposit Analysis %

Carbon	0.027
Manganese	1.23
Silicon	0.53
Chromium	23.95
Nickel.....	12.65
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	83,000 (572 MPa)
Yield Strength (psi)	61,000 (421 MPa)
Elongation in 2"	38%
DeLong Ferrite Number	17
75% Ar/25% CO ₂ or 100% CO ₂	

Diameters .045", 1/16"

ChromaWeld™ 316LT1

ALL POSITION

AWS E316T1-1/-4

An austenitic stainless steel all-purpose gas shielded flux-cored wire with low carbon used for joining Types 316, 316L, CF-8M and CF-3M stainless steels.

Features

- Self-detaching slag
- Spray-like arc transfer
- High moisture resistance

Benefits

- Welds extremely well in vertical (up) position, as well as flat & horizontal
- Excellent welder appeal
- Low spatter and less clean-up
- Good weld soundness & extended shelf-life

Typical Deposit Analysis %

Carbon	0.028
Manganese	1.25
Silicon	0.55
Chromium	18.80
Nickel.....	12.60
Molybdenum.....	2.65
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	82,000 (565 MPa)
Yield Strength (psi)	60,000 (414 MPa)
Elongation in 2"	39%
DeLong Ferrite Number	9
75% Ar/25% CO ₂ or 100% CO ₂	

Diameters .045", 1/16"

Stainless Steel Wires

STAINLESS STEEL SOLID WIRES — SPOOLED/COILED/CUT LENGTHS

308/308L

AWS ER308, ER308L

Lower range carbon 308 to help prevent intergranular corrosion. Used to weld Types 201, 302, 304, and 308 stainless steels. Also used for joining some dissimilar 300 series stainless steels.

Typical Deposit Analysis %

Carbon	0.02
Chromium	20.50
Nickel	10.50
Mo	0.30
Manganese	1.70
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	85,000 (586 MPa)
Yield Strength (psi)	58,000 (400 MPa)
Elongation in 2"	36%
Impact Resistance RT (Charpy V Notch) -320°F	96 ft•lbs 43 ft•lbs
DeLong Ferrite Number	11

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

Cut lengths available.

308/308H

AWS ER308, ER308H

Use on Types 301, 302, 305, and 308 base metals. Carbon is restricted to the higher range (0.04-0.08%) to give increased strength for applications where high mechanical properties are required.

Typical Deposit Analysis %

Carbon	0.05
Chromium	20.00
Nickel	10.00
Molybdenum	0.20
Manganese	1.70
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	88,000 (607 MPa)
Yield Strength (psi)	60,000 (414 MPa)
Elongation in 2"	40%
Impact Resistance RT (Charpy V Notch)	92 ft•lbs
DeLong Ferrite Number	10

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

308L HiSi

AWS ER308LSi

A 308L chemistry which has been modified with a higher silicon level to increase weld puddle fluidity, ensuring better tie-ins and potentially higher welding speeds.

Typical Deposit Analysis %

Carbon	0.02
Chromium	20.00
Nickel	10.00
Molybdenum	0.30
Manganese	1.60
Silicon	0.80
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	86,000 (593 MPa)
Yield Strength (psi)	57,000 (393 MPa)
Elongation in 2"	42%
Impact Resistance RT (Charpy V Notch) -320°F	92 ft•lbs 33 ft•lbs
DeLong Ferrite Number	12

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

309/309L

AWS ER309, ER309L

Used to join similar 309L alloys or join 300 series stainless steels to carbon or low alloy steels.

Typical Deposit Analysis %

Carbon	0.02
Chromium	24.00
Nickel	13.50
Molybdenum	0.20
Manganese	2.10
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	87,000 (600 MPa)
Yield Strength (psi)	59,000 (407 MPa)
Elongation in 2"	40%
Impact Resistance RT (Charpy V Notch)	100 ft•lbs
DeLong Ferrite Number	12

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

Cut lengths available

309 (H)

AWS ER309

This product is produced in the upper range of carbon content to give increased high temperature strength. For welding Type 309 stainless steels, 18-8 clad steel, or dissimilar metals.

Typical Deposit Analysis %

Carbon	0.06
Chromium	24.00
Nickel	12.50
Molybdenum	0.20
Manganese	1.70
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	92,000 (634 MPa)
Yield Strength (psi)	60,000 (414 MPa)
Elongation in 2"	38%
Impact Resistance RT (Charpy V Notch)	85 ft•lbs
DeLong Ferrite Number	9

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

309L HiSi

AWS ER309LSi

A modified 309L deposit. The higher silicon levels help to overcome the typical sluggish nature of 300 series stainless steel welding puddles.

Typical Deposit Analysis %

Carbon	0.02
Chromium	24.00
Nickel	13.00
Molybdenum	0.20
Manganese	1.70
Silicon	0.85
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	87,000 (600 MPa)
Yield Strength (psi)	56,000 (386 MPa)
Elongation in 2"	36%
Impact Resistance RT (Charpy V Notch)	92 ft•lbs
DeLong Ferrite Number	10

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

Stainless Steel Wires

STAINLESS STEEL SOLID WIRES — SPOOLED/COILED/CUT LENGTHS

316/316L

AWS ER316, ER316L

A molybdenum bearing alloy for increased pitting corrosion resistance. The carbon is limited to the lower range for better intergranular corrosion resistance.

Typical Deposit Analysis %

Carbon	0.02
Chromium	19.00
Nickel	12.50
Molybdenum	2.50
Manganese	1.70
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	86,000 (593 MPa)
Yield Strength (psi)	57,000 (393 MPa)
Elongation in 2"	36%
Impact Resistance RT (Charpy V Notch) -320°F	82 ft•lbs 34 ft•lbs
DeLong Ferrite Number	10

Approvals and conformances:

AWS Spec A5.9, ASME
SFA5.9 (F-6, A-8)

Cut lengths available

410

AWS ER410

Air-hardening stainless for welding 12Cr material. Heat treatable welding deposit. Preand post-weld heat treatments may be required.

Typical Deposit Analysis %

Carbon	0.08
Chromium	13.00
Molybdenum	0.10
Manganese	0.50
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

(Heat Treated for 1 hr. @ 1375°F)

Tensile Strength (psi)	79,000 (545 MPa)
Yield Strength (psi)	44,000 (303 MPa)
Elongation in 2"	25%
(Charpy V Notch) -320°F	34 ft•lbs
DeLong Ferrite Number	—

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-6)

316L HiSi

AWS ER316LSi

A 316L formulation with an increased silicon level for better wetting action when using the GMAW process.

Typical Deposit Analysis %

Carbon	0.02
Chromium	19.00
Nickel	12.50
Molybdenum	2.50
Manganese	1.70
Silicon	0.85
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	87,000 (600 MPa)
Yield Strength (psi)	57,000 (393 MPa)
Elongation in 2"	38%
Impact Resistance RT (Charpy V Notch) -320°F	95 ft•lbs 36 ft•lbs
DeLong Ferrite Number	10

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

347

AWS ER347

Stabilized with columbium to help prevent intergranular corrosion. Better corrosion resistance than Type 308. Used for welding Types 347 and 321 steels. Good corrosion resistance in applications up to 1400°F.

Typical Deposit Analysis %

Carbon	0.035
Chromium	20.00
Nickel	10.00
Molybdenum	0.20
Manganese	1.30
Silicon	0.40
Iron	Balance

Typical Weld Metal Properties

Tensile Strength (psi)	90,000 (621 MPa)
Yield Strength (psi)	59,000 (407 MPa)
Elongation in 2"	42%
Impact Resistance RT (Charpy V Notch) -320°F	112 ft•lbs 34 ft•lbs
DeLong Ferrite Number	9

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)

312 AC-DC

AWS ER312-16

Welding Type 312 base metals. Excellent for dissimilar metal joining due to high ferrite potentials.

Typical Deposit Analysis %

Carbon	0.07
Manganese	0.80
Silicon	0.40
Chromium	28.50
Nickel	9.10
Iron	Balance

Typical Properties and Ferrite Number of Weld Deposit as Welded

Tensile Strength (psi)	115,000 (793 MPa)
Yield Strength (psi)	95,000 (655 MPa)
Elongation in 2"	25%
DeLong Ferrite Number	45

Approvals and conformances:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-6)

Cut lengths only

Stainless Steel Wires

GOLDCOR™ STAINLESS STEEL GAS-SHIELDED METAL-CORED WIRES

GoldCOR™ 308LSi

FLAT & HORIZONTAL

AWS EC308LSi

An austenitic stainless steel wire used to join 301, 302, 304, 304L and 308 stainless steels.

Typical Deposit Analysis %

Carbon	0.023
Chromium	20.50
Nickel	10.10
Molybdenum	0.25
Manganese	1.50
Silicon	0.85
Phosphorus	0.02
Sulfur	0.01
Copper	0.2

Typical Weld Metal Properties*

DeLong Ferrite	10-18
Schaeffler Number Range	7-15
WRC Number Range (1992)	8-19
98%Ar/2%O ₂ or 95%Ar/5%CO ₂	

Diameters .045"

Approvals and conformance:

AWS Spec A5.9,
ASME SFA5.9 (F-6, A-8)

GoldCOR™ 309LSi

FLAT & HORIZONTAL

AWS EC309LSi

An austenitic stainless steel wire used to join similar 309L alloys or join 300 series stainless steel to carbon or low alloys steels.

Typical Deposit Analysis %

Carbon	0.025
Chromium	23.90
Nickel	13.10
Molybdenum	0.25
Manganese	1.50
Silicon	0.85
Phosphorus	0.02
Sulfur	0.01
Copper	0.20

Typical Weld Metal Properties*

DeLong Ferrite	13-20
Schaeffler Number Range	11-17
WRC Number Range (1992)	11-19
98%Ar/2%O ₂ or 95%Ar/5%CO ₂	

Diameters .045", 1/16"

Approvals and conformance:

AWS Spec A5.9, ASME
SFA5.9 (F-6, A-8)

GoldCOR™ 316LSi

FLAT & HORIZONTAL

AWS EC316LSi

An austenitic stainless steel wire used to join 316 and 316L stainless steels.

Typical Deposit Analysis %

Carbon	0.02
Chromium	19.10
Nickel	12.40
Molybdenum	2.50
Manganese	1.50
Silicon	0.85
Phosphorus	0.02
Sulfur	0.01
Copper	0.20

Typical Weld Metal Properties*

DeLong Ferrite	4-10
Schaeffler Number Range	4-10
WRC Number Range (1992)	4-10
98%Ar/2%O ₂ or 95%Ar/5%CO ₂	

Diameters .045"

Approvals and conformance:

AWS Spec A5.9, ASME SFA5.9 (F-6, A-8)