

THE MISSING ELEMENT IS



Your single source for alloy consumables.

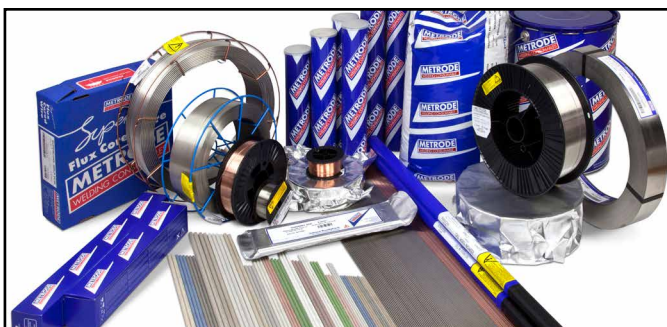
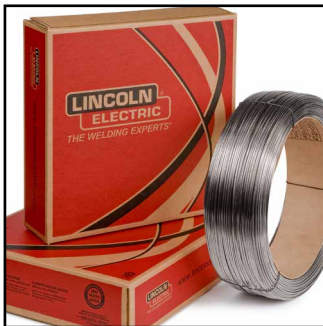
PREMIUM ALLOY WELDING SOLUTIONS

Lincoln Electric is your single source for alloy welding consumables. We make it easy to access our special alloy products to meet your needs.

You can purchase stainless steel, nickel, iron and cobalt based hardfacing products in stick, MIG, TIG, SAW, and flux-cored form for any application from power generation, chemical and petrochemical, offshore, LNG, and nuclear to meet your needs.

We can provide you with what you need for your alloy applications.

- **Save Time** - You no longer have to locate special suppliers for small batches.
- **Prepaid Freight** - Prepaid freight cost for all alloy products on orders in excess of \$250.
- **Efficient Order Process** - Place a single PO for all alloy products and include with other Lincoln products.
- **In Stock Availability** - We have all alloys in stock so you don't have to stock expensive materials.
- **Advanced Technology Solutions** - Partnering with Lincoln Electric allows you access to the foremost technical alloy experts in the industry.



NICKEL-BASED ALLOYS

Our commitment to perfecting the consumables manufacturing process has allowed Lincoln Electric to build the most complete portfolio of nickel welding alloys in the industry. Our nickel alloys are specifically designed to perform with our high tech equipment and engineered waveforms to provide an unparalleled nickel welding experience for almost any corrosive environment.



Application	Stick Electrode (AWS Classification)	Solid Wire - MIG/TIG/SAW (AWS Classification)	FCAW (AWS Classification)
Ni	Tech-Rod® 99 (ENi-CI) Tech-Rod 141 (ENi-1)	Techalloy® 99 (ERNi-CI) Techalloy 208 (ERNi-1)	
Ni/Fe	Tech-Rod 55 (ENiFe-CI)	Techalloy 55 ⁽¹⁾	
Ni/Cr	Tech-Rod 182 (ENiCrFe-3)	Techalloy 606 (ERNiCr-3)	
Ni/Cr/Fe	Tech-Rod Weld A (ENiCrFe-2)	Techalloy 718 (ERNiFeCr-2) Techalloy 825 (ERNiFeCr-1)	
Ni/Cr/Mo	Tech-Rod 112 (ENiCrMo-3) Tech-Rod 122 (ENiCrMo-10) Tech-Rod 276 (ENiCrMo-4)	Techalloy 625 (ERNiCrMo-3) Techalloy 622 (ERNiCrMo-10) Techalloy 276 (ERNiCrMo-4)	Supercore® 625P (ENiCrMo3T1-4)
Ni/Cr/Mo/W/Co	Tech-Rod 117 (ENiCrCoMo-1)	Techalloy 617 (ERNiCrCoMo-1)	
Ni/Cu	Tech-Rod 190 (ENiCu-7)	Techalloy 418 (ERNiCu-7)	
Cu/Ni	Tech-Rod 187 (ECuNi)	Techalloy 413 (ERCuNi)	

⁽¹⁾AWS Similar to ENiFe-CI.

NOTE: Recommended flux for SAW nickel applications, Lincolnweld® P2000, P2007. For more information on our nickel alloys visit, www.lincolnelectric.com/alloys

STAINLESS STEEL ALLOYS

Our goal is to meet the demands of your stainless steel applications, including the most critical demands of the nuclear industry. We analyze every stage of the manufacturing process, to ensure that every spool of wire and every stick electrode provides consistent mechanical properties for optimal performance. With this type of attention to detail we can produce the highest quality, most dependable, stainless steel consumables in the industry.

Application	Stick Electrode (AWS Classification)	MIG (AWS Classification)
Cr/Ni	Excalibur® 308L-15, -16, -17 (E308/308L-15, -16, -17) Tech-Rod 308L (E308-16/308L-16) Tech-Rod 347 (E347-16)	Blue Max® 308LSi (ER308Si, ER308LSi) Blue Max LNM 347Si (ER347Si) Techalloy 308L (ER308L) Techalloy 308LHS (ER308LSi) Techalloy 347 (ER347)
Cr/Ni/Mo	Excalibur 316L-15, -16, -17 (E316/316L-15, -16, -17) Tech-Rod 316L (E316-16/E316L-16) Tech-Rod 317L (E317L-16)	Blue Max 316LSi (ER316Si, ER316LSi) Techalloy 316L (ER316L) Techalloy 316LHS (ER316LSi)
Dissimilar Welds	Excalibur 309/309L-15, -16, -17 (E309/309L-15, -16, -17) Tech-Rod 309L (E309-16/309L-16) Tech-Rod 312 (E312-16)	Blue Max 309LSi (ER309Si, ER309LSi) Techalloy 309L (ER309L) Techalloy 309LHS (ER309LSi) Techalloy 309LMo (ER309LMo) ⁽¹⁾ Techalloy 307 ⁽²⁾ Techalloy 312 (ER312)
Duplex and Super Duplex	Tech-Rod 2209 (E2209-16) Tech-Rod 2594 (E2594-16)	Blue Max LNM 4462 (ER2209) Techalloy 2209 (ER2209) Techalloy 2594 (ER2594)
High Heat	Tech-Rod 308H (E308-16/308H-16) Tech-Rod 310 (E310-16) Tech-Rod 320LR (E320LR-16) Tech-Rod 330 (E330-16)	Techalloy 308H (ER308H) Techalloy 310 (ER310) Techalloy 320LR (ER320LR) Techalloy 330 (ER330)
Specialty Stainless	Tech-Rod 410 (E410-16) Tech-Rod 410NiMo (E410NiMo-16) Tech-Rod 385 (E385-16) Tech-Rod 630 (E630-16)	Techalloy 410 (ER410) Techalloy 410NiMo (ER410NiMo) Techalloy 385 (ER385) Techalloy 630 (ER630) Techalloy 409Nb (ER409Nb)

⁽¹⁾ ISO 14343-A 23 12 2 L, similar to ER309LMo ⁽²⁾ISO 14343-A 18 8 Mn; Similar to ER307.

NOTE: Recommended flux for stainless steel applications, Lincolnweld® P2000, P2007, ST100. For more information on our stainless steel alloys visit, www.lincolnelectric.com/alloys



TIG (AWS Classification)	SAW (AWS Classification)	Flux-Cored (AWS Classification)
Lincoln® ER308/308L (ER308/308L) Techalloy 308L (ER308L) Techalloy 347 (ER347)	Lincolnweld® 308/308L (ER308, ER308L) Techalloy 308L (ER308L) Techalloy 347 (ER347)	UltraCore® FC 308L (E308T0-1/4, E308LT0-1/4) UltraCore FCP 308L (E308LT1-1/4, E308T1-1/4) Supercore 347 (E347T0-1/4)
Lincoln ER316/316L (ER316/316L) Techalloy 316L (ER316L) Techalloy 317L (ER317L)	Lincolnweld 316/316L (ER316, ER316L) Techalloy 316L (ER316L) Techalloy 317L (ER317L)	UltraCore FC 316L (E316T0-1/4, E316LT0-1/4) UltraCore FCP 316L (E316LT1-1/4, E316T1-1/4)
Lincoln ER309/309L (ER309/309L) Techalloy 309L (ER309L) Techalloy 309LMo (ER309LMo)	Lincoln 309/309L (ER309, ER309L) Techalloy 309L (ER309L) Techalloy 309LMo (ER309LMo)	UltraCore FC 309L (E309T0-1/4, E309LT0-1/4) UltraCore FCP 309L (E309LT1-1/4, E309T1-1/4)
Blue Max LNT 4462 (ER2209) Techalloy 2209 (ER2209) Techalloy 2594 (ER2594)	Techalloy 2209 (ER2209) Techalloy 2594 (ER2594)	Supercore 2205P (E2209T1-1/4) Supercore 2507P (E2594T1-1/4)
Techalloy 308H (ER308H) Techalloy 310 (ER310) Techalloy 320LR (ER320LR) Techalloy 330 (ER330)	Techalloy 308H (ER308H)	
Techalloy 410 (ER410) Techalloy 410NiMo (ER410NiMo) Techalloy 385 (ER385) Techalloy 630 (ER630) Techalloy 409Nb (ER409Nb)	Techalloy 410 (ER410) Techalloy 410NiMo (ER410NiMo) Techalloy 385 (ER385)	

HARDFACING ALLOYS

IRON & COBALT BASED

Whether your application is for buildup, abrasion, impact, or high temperature, we have the hardfacing products you need. Lincoln Electric continues to invest in R&D to provide some of the most innovative products on the market. Our portfolio includes iron and cobalt based products to cover a wide range of applications.

IRON BASE

Application	Electrode	Cored Wire
Build-Up	Wearshield® BU	Lincore® BU-G Lincore BU Lincore 33
Metal-to-Metal	Wearshield MI Wearshield Mangjet®	Lincore 40-0 Lincore 55-G Lincore 55
Severe Impact	Wearshield 15CrMn Wearshield FROG MANG®	Lincore 15CrMn Lincore FROG MANG Lincore M
Abrasion Plus Impact	Wearshield ABR Wearshield 44	Lincore 50
Metal-to-Earth Wear	Wearshield ME	Lincore 50
Severe Abrasion	Wearshield 60	Lincore 60-0 Lincore 65-0

SUBMERGED ARC PROCESS

Low Alloy Undercarriage & Tool Joints

Steel Mill Roll Rebuilding Alloys

Lincore 30-S
Lincore 32-S
Lincore 35-S
Lincore 40-S
Lincore 42-S

Lincore 20
Lincore 8620
Lincore 4130
Lincore 410
Lincore 410NiMo
Lincore 423L
Lincore 423Cr

Lincore 420
Lincore 96-S
Lincore 102W
Lincore 102HC

SUBMERGED ARC FLUX

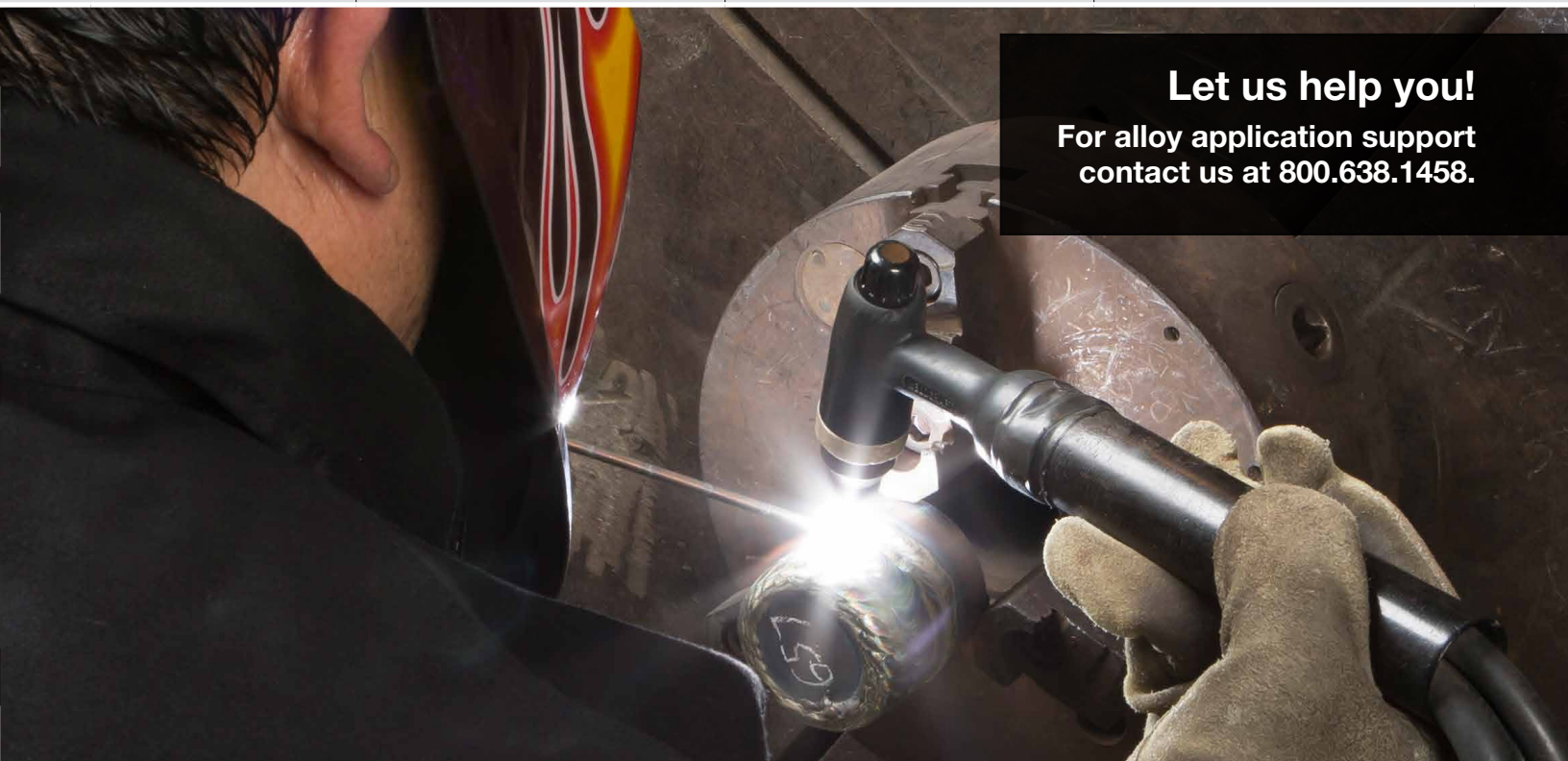
Lincolnweld® 801

Lincolnweld 802



COBALT BASE

Application	Bare Rod	Coated Electrode	Cored Wire
High Temperature	WT-1 Bare Rod (ERCoCr-C)	WT-1 Electrode (ECoCr-C)	WT-1 MIG Wire (ERCCoCr-C)
Metal-to-Metal	WT-6 Bare Rod (ERCoCr-A)	WT-6 Electrode (ECoCr-A)	WT-6 MIG Wire (ERCCoCr-A)
Erosion	WT-12 Bare Rod (ERCoCr-B)	WT-12 Electrode (ECoCr-B)	WT-12 MIG Wire (ERCCoCr-B)
Abrasion Plus Impact	WT-21 Bare Rod (ERCoCr-E)	WT-21 Electrode (ECoCr-E)	WT-21 MIG Wire (ERCCoCr-E)



Let us help you!
 For alloy application support
 contact us at 800.638.1458.

THE LINCOLN ELECTRIC COMPANY
22801 St. Clair Avenue • Cleveland, OH U.S.A. • 44117-1199
Phone: +1.216.481.8100 • www.lincolnelectric.com

