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.

www.lincolnelectric.com/alloys

Customer Support: +1.800.638.1458

NICKEL-BASED ALLOYS

Application	Stick Electrode (AWS Classification)	Solid Wire - MIG/TIG/SAW (AWS Classification)	FCAW (AWS Classification)
Ni	Tech-Rod® 99 (ENi-Cl) Tech-Rod 141 (ENi-1)	Techalloy® 99 (ERNi-Cl) Techalloy 208 (ERNi-1)	
Ni/Fe	Tech-Rod 55 (ENiFe-Cl)	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-Cl.
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

Application	Stick Electrode (AWS Classification)	MIG (AWS Classification)	TIG (AWS Classification)	SAW (AWS Classification)	Flux-Cored (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)	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)
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)	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)
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)	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)
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)	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)
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)	Techalloy 308H (ER308H) Techalloy 310 (ER310) Techalloy 320LR (ER320LR) Techalloy 330 (ER330)	Techalloy 308H (ER308H)	
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)	Techalloy 410 (ER410) Techalloy 410NiMo (ER410NiMo) Techalloy 385 (ER385) Techalloy 630 (ER630) Techalloy 409Nb (ER409Nb)	Techalloy 410 (ER410) Techalloy 410NiMo (ER410NiMo) Techalloy 385 (ER385)	

[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

HARDFACING ALLOYS - 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-O 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-O Lincore 65-O
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	

Recommended flux for hardfacing applications, Lincolnweld® 801, 802.
For more information on our hardfacing and cobalt alloys visit, www.lincolnelectric.com/alloys

HARDFACING ALLOYS - 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)

CUSTOMER SUPPORT

PH: +1.800.638.1458
For more information go to www.lincolnelectric.com/alloys

IMPORTANT

Arc Welding is safe when sufficient measures are taken to protect the welder from potential hazards. Recognize and safeguard yourself against these hazards, such as electric shock, overexposure to arc radiation, fumes and gases. Every welder should be familiar with the ANSI Z49.1 documents, “Safety in Welding and Cutting”, available from the American Welding Society, Miami, Florida. Also request bulletin E205 “Arc Welding Safety” or MC10-92 Welding Safety Interactive DVD, available from The Lincoln Electric Company.

Please refer to www.lincolnelectric.com for more safety information.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric® for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric® is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer’s particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric® is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric® is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric® affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

CERTIFICATIONS

ISO 14001 and 9001 certified – manufactured to standards for environmental and quality management systems.

MC13-111 08/13

LINCOLN® ELECTRIC
THE WELDING EXPERTS®