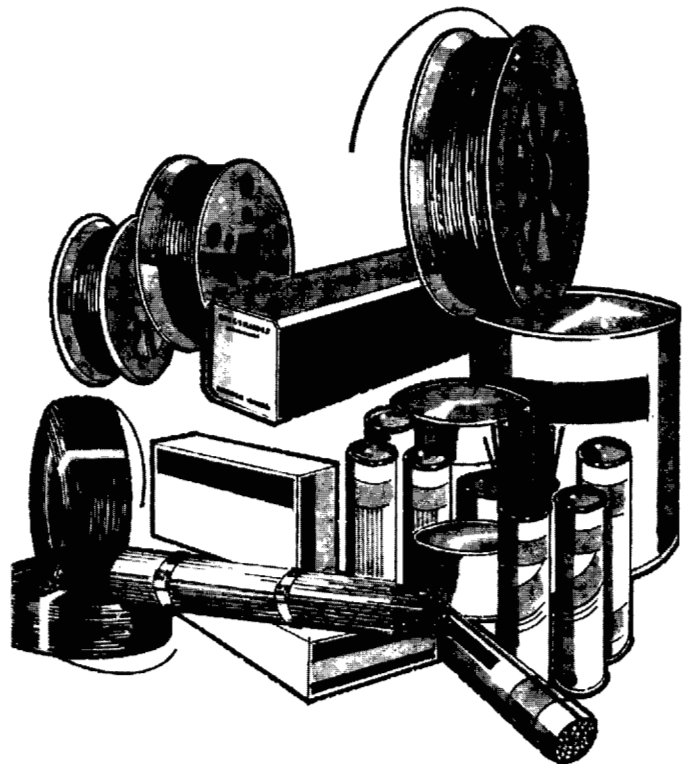


AWS FMC: 2000

Filler Metal Comparison Charts



American Welding Society



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Keywords - Filler metal classification
Comparative trade names

AWS FMC:2000

Filler Metal Comparison Charts

Compiled by
AWS Technical Department

Abstract

More than 80 producers and marketers of filler metals have supplied trade names of thousands of products conforming to AWS filler metal classifications. Products are tabulated by filler metal classifications within the thirty individual specifications.



American Welding Society

550 N. W. LeJeune Road, Miami, Florida 33126

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American Welding Society
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The *Filler Metal Comparison Charts* are a collective effort of the AWS Technical Staff to provide information to assist with the selection of competitive commercial products.

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Foreword

AWS FMC:2000, *Filler Metal Comparison Charts*, is the tenth revision of this popular comparison of trade names of welding electrodes and rods. A5.0-57 listed the products of sixty one companies producing material conforming to the various classifications of twelve AWS filler metal specifications. Subsequent revisions in 1959, 1966, 1971, 1978, 1980, 1983, 1986, 1989 and 1993 reflect the growth of the filler metal market.

The American Welding Society receives many inquiries concerning filler metals and their classifications. The following questions are most often asked:

1. What is the classification of Brand X?
2. Is Brand X in the same classification as Brand Y?
3. Who makes, or supplies, these brands?

To provide a single comprehensive source for this type of information, the American Welding Society publishes the *Filler Metal Comparison Charts*. These charts constitute a cross-reference between the AWS filler metal classifications and the brand name designations used by the suppliers. While the individual charts are extensive, it is recognized that they are not all-inclusive. There are filler metals available that may conform to AWS specifications, but the manufacturers chose not to supply the required information.

The "G" classification indicates that the filler metal is of a *general* classification. It is general because not all of the particular requirements specified for each of the other classifications are specified for the specific classification. The intent in establishing this classification was to provide a means by which filler metals that differ in one respect or another (chemical composition, for example) from all other classifications (meaning that the composition of the filler metal — in the case of the example—does not meet the composition specified for any of the classifications in the specification) can still be classified according to the specification. The purpose is to allow a useful filler metal—one that otherwise would have to await a revision of the specification—to be classified immediately, under the existing specification.

CONSUMERS ARE ADVISED THAT TWO FILLER METALS WITH THE SAME "G" CLASSIFICATION MAY BE SUBSTANTIALLY DIFFERENT. BRAND "B" SHOULD NOT BE USED TO REPLACE BRAND "A" WITHOUT A THOROUGH COMPARISON OF PROPERTIES OF BOTH FILLER METALS.

Information regarding brand names and their classifications was obtained from the suppliers and subsequently verified by them. Names, addresses, and telephone numbers of suppliers, where available, appear at the end of the charts.

THE INFORMATION IN THESE COMPARISON CHARTS HAS BEEN OBTAINED FROM THE MANUFACTURER OR SUPPLIER OF THE PARTICULAR FILLER METAL AT THE TIME OF ISSUE. therefore, THE AMERICAN WELDING SOCIETY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LISTINGS. FILLER METALS ARE NOT "APPROVED" BY THE AMERICAN WELDING SOCIETY. THE MANUFACTURER OR SUPPLIER SHOULD BE CONSULTED REGARDING CERTIFICATION OF COMPLIANCE TO SPECIFICATIONS AND AVAILABILITY OF EACH ITEM.

Filler metals are grouped according to AWS filler metal specification, which are listed in numerical order. The filler metals classifications are in the order in which they appear in their respective specification. The flux-electrode combination listings for AWS A5.17 and AWS A5.23 are ordered by chemical composition first, then by strength, heat treatment, etc.

Two other method of entering the charts are available. If the AWS classification designation of the *desired filler metal* is known, the appropriate page number can be obtained from the Index of AWS Classification designations. If the brand name is known, the page or pages on which that brand appears can be found in the Index of Brand Names.

Information concerning the manufacturing requirements, usability, and the mechanical, chemical, and other properties of a filler metal must be obtained from the respective AWS filler metal specification.¹ In cases where written assurance of specification compliance or manufacturing controls is desired (or must be documented), the user must consult the manufacturer.

Comments concerning this publication are invited, both from users and from organizations wishing to have filler metals listed. Correspondence should be addressed to the Managing Director, Technical Services, American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126.

¹ Filler metal specifications may be purchased from the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126.

Table of Contents

	Page No.
<i>Foreword</i>	iii
<i>AWS Classification System</i>	vi
CARBON STEEL Covered Arc Welding Electrodes, A5.1-91	1
CARBON AND LOW ALLOY Bare Gas Welding Rods, A5.2-92	13
ALUMINUM AND ALUMINUM ALLOY Covered Arc Welding Electrodes, A5.3-91	15
STAINLESS STEEL Covered Arc Welding Electrodes, A5.4-92	17
LOW ALLOY STEEL Covered Arc Welding Electrodes, A5.5-96	87
COPPER AND COPPER ALLOY Covered Arc Welding Electrodes, A5.6-84R	111
COPPER AND COPPER ALLOY Bare Rods and Electrodes, A5.7-84	117
BRAZING Filler Metals, A5.8-92	125
STAINLESS STEEL Bare, Cored and Stranded Electrodes, A5.9-93	151
ALUMINUM AND ALUMINUM ALLOY Electrodes and Rods, A5.10-92	189
NICKEL AND NICKEL ALLOY Covered Arc Welding Electrodes, A5.11/A5.11M-97	205
TUNGSTEN Electrodes For Arc Welding, A5.12/A5.12M-98	217
SOLID SURFACING Electrodes and Welding Rods, A5.13-80R	221
NICKEL AND NICKEL ALLOY Bare Electrodes and Welding Rods, A5.14/A5.14M-97	239
CAST IRON Welding Electrodes and Rods, A5.15-90	253
TITANIUM AND TITANIUM ALLOY Bare Welding Rods and Electrodes, A5.16-90	259
CARBON STEEL Electrodes and Fluxes for Submerged	
Arc Welding, A5.17/A5.17M-97 (Part 1 - Welding Electrodes Only)	265
CARBON STEEL Electrodes and Fluxes for Submerged	
Arc Welding, A5.17/A5.17M-97 (Part 2 - Typical Flux-Electrode Combinations)	269
CARBON STEEL Filler Metals for Gas Shielded Arc Welding, A5.18-93	279
MAGNESIUM ALLOY Bare Electrodes and Welding Rods, A5.19-92	285
CARBON STEEL Flux Cored Arc Welding Electrodes, A5.20-95	289
COMPOSITE SURFACING Electrodes and Welding Rods, A5.21-80R	299
STAINLESS STEEL Flux Cored Arc Welding Electrodes and Flux Cored	
Rods For Gas Tungsten Arc Welding, A5.22-95	305
LOW-ALLOY STEEL Electrodes and Fluxes for Submerged	
Arc Welding, A5.23/A5.23M-97 (Part 1 - Welding Electrodes Only)	339
LOW-ALLOY STEEL Electrodes and Fluxes for Submerged	
Arc Welding, A5.23/A5.23M-97 (Part 2 - Typical Flux-Electrode Combinations)	351
ZIRCONIUM and ZIRCONIUM ALLOY Bare Welding Electrodes	
and Rods, A5.24-90	363
ELECTROGAS Welding Consumables, A5.26/A5.26M-97	365
LOW-ALLOY STEEL Filler Metals for Gas Shielded Arc Welding, A5.28-96	367
LOW-ALLOY STEEL Flux Cored Welding Electrodes, A5.29-98	377
CONSUMABLE INSERTS, A5.30-97	389
FLUXES for BRAZING AND BRAZE WELDING, A5.31-92	391
Index of AWS Classification Designations	395
Index of Product Trade Names	405
Supplier's Names and Addresses	477

AWS Classification System

The AWS classification system provides means of identifying filler metals, fluxes, consumable inserts, and tungsten electrodes that meet the requirements of AWS specifications. Although a full explanation of the system and its symbols is beyond the scope of this document, the outline given below will provide a brief summary of the general scheme. For complete details, the pertinent specification should be consulted.

Prefix Letters

Prefix letters used to indicate a product form, the joining process, or both are as follows:

E	Indicates an arc welding electrode, which, by definition, carries the arc welding current.
R	Indicates a welding rod which is heated by means other than by carrying the arc welding current.
ER	Indicates a filler metal which may be used either as an arc welding electrode or as a welding rod.
EC	Indicates a composite electrode.
EW	Indicates a (nonconsumable) tungsten electrode.
B	Indicates a brazing filler metal.
RB	Indicates a filler metal that may be used as a welding rod or as a brazing filler metal, or both.
RG	Indicates a welding rod to be used in oxyfuel gas welding.
F	Indicates a flux for use in submerged arc welding.
IN	Indicates a consumable insert.

Symbols Following the Prefix

Classification symbols that follow the prefix are based on criteria that best evaluate the welding capabilities of the filler metal for the applicable process. These criteria include (a) chemical composition of filler or weld metal, (b) weld metal mechanical properties, (c) certain process parameters or combinations of all factors or both. The classification system also varies with the major specification requirements.

Optional Supplemental Designators

R	— Moisture resistant electrode covering ²
H16	— Diffusible hydrogen shall be 16ml/100g of weld metal maximum ³
H8	— Diffusible hydrogen shall be 8 ml/100 g of weld metal maximum ²
H4	— Diffusible hydrogen shall be 4 ml/100 g of weld metal maximum ²
-1	— Improved impact properties and somewhat higher ductility.

Mild and Low Alloy Steel Covered Electrodes

For mild and low alloy steel covered electrodes, the prefix E is followed by a number series which indicates minimum strength level, position capability, type of covering, and welding current. The following paragraph and table explains how the number series is used in AWS A5.1-91.

² Only applies to electrodes found in AWS A5.1.

³ Presently, H16, H8, and H4 only apply to AWS A5.1 and A5.23.

The letter E designates an electrode. The first two digits, 60, for example, designates tensile strength of at least 60 ksi for the weld metal, in the as-welded condition. The third digit indicates the position in which satisfactory welds can be made with the electrode. Thus, the "1" as in E6010, means that the electrode is satisfactory for use in all positions (flat, vertical, overhead, and horizontal). The "4" as in E7048, indicates the electrode is suitable for the flat position and also for vertical-down welding and for other positions (see table). The last two digits taken together indicate the type current with which the electrode can be used and the type of covering on the electrode, as listed in the following table.

AWS Classification	Type of Covering	Capable of Producing Satisfactory Welds in Positions Shown ^a	Type of Current ^b
E60 Series Electrodes			
E6010	High cellulose sodium	F, V, OH, H	dcep
E6011	High cellulose potassium	F, V, OH, H	ac or dcep
E6012	High titania sodium	F, V, OH, H	ac or dcen
E6013	High titania potassium	F, V, OH, H	ac or dc, either polarity
E6020	High iron oxide	H-fillets	ac or dcen
E6022 ^c	High iron oxide	F	ac or dc, either polarity
E6027	High iron oxide, iron powder	H-fillets, F	ac or dcen
E70 Series Electrodes			
E7014	Iron powder, titania	F, V, OH, H	ac or dc, either polarity
E7015	Low hydrogen sodium	F, V, OH, H	dcep
E7016	Low hydrogen potassium	F, V, OH, H	ac or dcep
E7018	Low hydrogen potassium, iron powder	F, V, OH, H	ac or dcep
E7024	Iron powder, titania	H-fillets, F	ac or dc, either polarity
E7027	High iron oxide, iron powder	H-fillets, F	ac or dcen
H7028	Low hydrogen potassium, iron powder	H-fillets, F	ac or dcep
E7048	Low hydrogen potassium, iron powder	F, OH, H, V-down	ac or dcep

a. The abbreviations, F, V, V-down, OH, H, and H-fillets indicate the welding positions as follows:

F	—	Flat
H	—	Horizontal
H-fillets	—	Horizontal fillets
V-down	—	Vertical down direction
V	—	Vertical—[For electrodes 3/16in. (4.8mm) and under, except 5/32 in. (4.0mm) and under for classifications E7014, E7015, E7106, and E7018]
OH	—	Overhead

b. dcep means direct current, electrode positive; dcen means direct current, electrode negative.

c. Electrodes of the E6022 classification are for single-pass welds.

Stainless Steel Electrodes

The three digit numbers that follow the prefix E or ER in A5.4, A5.9, or A5.22 indicate the chemical composition in the manner used by the AISI stainless steel alloy designations. In addition, letters or numbers may be used to indicate composition modifications.

Nickel, Copper, and Titanium Alloys

The designations for nonferrous product classifications such as the nickel alloys in AWS A5.11 and AWS A5.14; copper alloys in AWS A5.6, AWS A5.7, and AWS A5.27; and titanium alloys in AWS A5.16 follow the prefix as a list of chemical symbols of the elements considered significant in identifying the classification; for example, ECuSi, ECuNi, ERNiCrFe, ERNiCrMo, ERTi, etc. This pattern is also followed for the surfacing welding rods and electrodes in AWS A5.13 and AWS A5.21.

Aluminum and Aluminum Alloys

The specification for aluminum and aluminum alloy bare electrodes and rods, AWS A5.10, uses the Aluminum Association alloy designations after the ER prefix. The specification for aluminum and aluminum alloy arc welding electrodes, AWS A5.3, uses the E prefix to indicate a covered electrode with chemical composition equivalent to Aluminum Association alloy designations 1100, 3003, and 4043.

Tungsten and Tungsten Alloys

The designations that follow the prefix E in A5.12, either WP, WTh, or WZr, indicate pure tungsten, thoriated tungsten, or zirconiated tungsten, respectively. The numeral at the end of some classifications indicates a different chemical composition or product within the specific group.

Magnesium Alloys

The designations following the ER, in classifications contained in AWS A5.19, reflect chemical composition and are based on the same standard system used for base metals. The first part of the letter-number system indicates the two principal alloying elements by code letters arranged in order of decreasing percentage. The second part indicates the percentages (rounded to the nearest whole number) of the two principal alloying elements in the same order as the code letters. The third part is an assigned letter to distinguish different alloys with the same percentages of the two principal alloying elements.

Zirconium and Zirconium Alloys

The designations following the ER in the classifications contained in AWS A5.24 indicate chemical composition. The numerals that follow Zr (which indicates a zirconium base) provide a means for identifying the nominal composition of the filler metal.

Carbon and Low Alloy Steel Electrode-Flux Combinations for Submerged Arc Welding

The designators for AWS A5.17 and AWS A5.23 weld metal indicate the basic chemistry of the filler metal as well as the chemistry and mechanical properties of the weld metal. The identification system is explained in detail with the comparison chart. For additional information, consult the filler metal specification.

Other Product-Type Symbols

Letter symbols are also used following a numerical designation in certain specifications to further identify the product form. A "T" is used to indicate a flux cored electrode. An "S" is used to indicate a solid steel electrode for gas metal arc welding. A "C" is used to indicate a tubular metal-cored low alloy wire.

Suffix Symbols

Suffixes are used in various classifications. The AWS A5.5 (covered low alloy electrodes), AWS A5.23 (solid or composite low alloy bare electrodes), and AWS A5.29 (tubular flux cored low alloy electrodes) specifications for low alloy filler metals use suffixes such as -A1, -B1, -B2, -B2L, and -C1 to indicate chemical composition. The classifications for nonferrous products in AWS A5.6, AWS A5.7, and AWS A5.27 for copper alloys, and AWS A5.11 and AWS A5.14 for nickel alloys list a letter or number suffix to indicate the classification's position in a series of similar alloy groupings.

A similar suffix pattern also is used in AWS A5.13 and AWS A5.21 specifications for surfacing welding rods and electrodes.

Covered stainless steel electrodes employ a number -15 or -16 as a suffix to identify useability. The -15 suffix indicates that the electrode is designed for all-position operation using dcep (electrode positive). The -16 suffix indicates all-position operation with either ac or dcep (electrode positive) current.

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E6010

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA 6010
Airco Filler Metals	Pipe-Craft
American Filler Metals Company	AFM 6010
American Welding Alloys	AWA 6010
Arcweld Products, Ltd.	EASYARC 10, EASYARC 10+
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS S-6010
Bohler Thyssen Welding USA, Inc.	Thyssen Cel 70, Bohler Fox Cel
CARBO-WELD Schweissmaterialien GmbH	CARBO RC 3
Champion Welding Products	CHAMPION E6010
D&H Secheron Electrodes Limited	CELLUTHERME
Electromanufacturas S.A	West Arco XL-610 , ZIP 10-T ; West Rode 600/10
ESAB AB	Pipeweld 6010
ESAB WELDING & CUTTING PRODUCTS	SUREWELD 10-P; SUREWELD AP-100
EXSA S.A. - División Soldaduras OERLIKON	Cellocord P, PT
EXSA S.A.- División Fontargen	FON E 51 A, FON E 51 AT
HILARIUS HAARLEM HOLLAND BV	HILCO Pipeweld 6010
Hobart Welding Products	PIPEMASTER 60
HYUNDAI WELDING PRODUCTS, INC.	S-6010.D
Indura S.A. Industria y Comercio	INDURA 6010
Industrial Welding Corporation	NIHONWELD N-6010
Inweld Corporation	INWELD 6010
Kobe Steel, LTD.	KOBE-6010
Lincoln Electric Co.	Fleetweld 5P, 5P+, Easy-Arc 10
Lincoln Electric Company (Australia) Pty Ltd	Fleetweld 5P, Fleetweld 5P+
McKay Welding Products	MCKAY 6010 PM
Messer - MG Systems & Welding Inc.	MG 6010
Murex Welding Products	Murex 6010
Nassau Research Corp.	Tartan
NATWELD	E6010
Stoody Company - Thermadyne Industries	Cigweld Pipearc 6010
Thermal Arc	Thermal Arc TA-10
Uniweld Products, Inc.	Unipipe 6, UNI-6010
Washington Alloy Company	USA 6010

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E6011

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA ULTRA 11
Airco Filler Metals	EASY-ARC 6011, 6011C
American Filler Metals Company	AFM 6011
American Welding Alloys	AWA 6012
Arcweld Products, Ltd.	ARCWELD 230
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS S-6011
Champion Welding Products	CHAMPION E6011
Cronatron Welding Systems	Cronaweld E 6011
Electromanufacturas S.A	West Arco ACP-611 SS
ESAB WELDING & CUTTING PRODUCTS	SUREWELD SW-14
EXSA S.A. - División Soldaduras OERLIKON	Cellocord AP
EXSA S.A.- División Fontargen	FON E 51 B
HARRIS WELCO	WELCO E6011
Hobart Welding Products	HOBART 335A, HOBART 335C
HYUNDAI WELDING PRODUCTS, INC.	S-6011.D
Indura S.A. Industria y Comercio	INDURA 6011, 230P, 230S, 230, P. Azul
Industrial Welding Corporation	NIHONWELD N-6011
Inweld Corporation	INWELD 6011
Lincoln Electric Co.	Fleetweld 35, 35C, 35LS, 35+, 180, Arcweld 230
Lincoln Electric Company (Australia) Pty Ltd	Fleetweld 35, Fleetweld 35LS
McKay Welding Products	MCKAY 6011, SOFT-ARC 6011
Messer - MG Systems & Welding Inc.	MG 6011, MG 511
Murex Welding Products	Murex 6011, 6011C
Nassau Research Corp.	Tartan
NATWELD	E6011
Sodel Ltd	Sodel 30
Stoody Company - Thermadyne Industries	Cigweld Ferrocraft 11
Thermal Arc	Thermal Arc TA-11
Uniweld Products, Inc.	UNI-6011
Washington Alloy Company	USA 6011
Weld Mold Company	201

E6012

SOURCE	PRODUCT
Airco Filler Metals	EASY-ARC 6012

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E6012 (Continued from previous page)

SOURCE	PRODUCT
American Filler Metals Company	AFM 6012
American Welding Alloys	AWA 6012
Champion Welding Products	CHAMPION E6012
D&H Secheron Electrodes Limited	POPULAR
Electromanufacturas S.A	West Arco FP-612, ZIP-12
ELGA AB	P 41
ESAB WELDING & CUTTING PRODUCTS	SUREWELD SW-612
EXSA S.A. - División Soldaduras OERLIKON	Overcord F, M
EXSA S.A.- División Fontargen	FON E 52
HILARIUS HAARLEM HOLLAND BV	HILCO BROWN
Hobart Welding Products	HOBART 12
Indura S.A. Industria y Comercio	INDURA 6012
Industrial Welding Corporation	NIHONWELD N-6012
Inweld Corporation	INWELD 6012
Lincoln Electric Co.	Fleetweld 7, Resistens 100, Supra
Lincoln Electric Company (Australia) Pty Ltd	Fleetweld 7, Shieldarc 6012
Messer - MG Systems & Welding Inc.	MG 6012
Murex Welding Products	Murex 6012
Nassau Research Corp.	Tartan
Uniweld Products, Inc.	UNI-6012
Washington Alloy Company	USA 6012

E6013

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA 6013, LA6013P
Airco Filler Metals	EASY-ARC 6013, 6013D
American Filler Metals Company	AFM 6013
American Welding Alloys	AWA 6013
Arctec Alloys Limited	ARCTEC 220
Arcweld Products, Ltd.	SATINARC
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS R-143, AS R-144, AS R-146, AS R-132
CARBO-WELD Schweissmaterialien GmbH	CARBO RR 6, CARBO RR B 7
Champion Welding Products	CHAMPION E6013
Chosun Steel Wire Company	CR-13
Cronatron Welding Systems	Cronaweld E 6013

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E6013 (Continued from previous page)

SOURCE	PRODUCT
D&H Secheron Electrodes Limited	NORMA, MEDIO, EXOBEL, ECONOTHERME
Electromanufacturas S.A	West Arco SW-10, SW-613, SUPER SW-613; West Rode 600/13
ELGA AB	P 31, P 39, P 40, P 43, P 44, P 45 S, P 46
ELGA AB	P 42
ESAB AB	OK 43.32, 46.00, 50.10, 50.40
ESAB WELDING & CUTTING PRODUCTS	SUREWELD SW-15; SUREWELD 6013LV
EXSA S.A. - División Soldaduras OERLIKON	Overcord, Overcord S, Overcord 6013
EXSA S.A.- División Fontargen	FON E 53, FON E 54
Faiter Elettrodi S.p.A	ETAFAITER/M
HARRIS WELCO	WELCO E6013
HILARIUS HAARLEM HOLLAND BV	HILCO Red Extra, Velveta, Velora, Performa
Hobart Welding Products	HOBART 447A, HOBART 447C
HYUNDAI WELDING PRODUCTS, INC.	S-6013LF, S-6013.V, S-6013.G
Indura S.A. Industria y Comercio	INDURA 90, 90A, 6013
Industrial Welding Corporation	NIHONWELD N-6013
Inweld Corporation	INWELD 6013
Kobe Steel, LTD.	B-33, RB-26, TB-24, TBI24, TB-43, ZERODE-44, ZERODE-33LS
Lincoln Electric Co.	Fleetweld 37, 37+, 57, Satinarc, Omnia 21, 30, 46, Panta, Universalis, Pantafix, Cumulo
Lincoln Electric Company (Australia) Pty Ltd	Shieldarc 6013
McKay Welding Products	MCKAY 6013
Messer - MG Systems & Welding Inc.	MG 6013
Murex Welding Products	Murex 6013, 6013D
Nassau Research Corp.	Tartan
NATWELD	E6013
Sodel Ltd	Sodel 31
Stoody Company - Thermadyne Industries	Cigweld Ferrocraft 13
Thermal Arc	Thermal Arc TA-13
Uniweld Products, Inc.	UNI-6013
Washington Alloy Company	USA 6013, MS3V
Weld Mold Company	200

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E6019

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD N-101
Kobe Steel, LTD.	B-10, B-14, B-17, BI-14, ZERODE-1

E6020

SOURCE	PRODUCT
Champion Welding Products	CHAMPION E6020
D&H Secheron Electrodes Limited	UNITHERME
Industrial Welding Corporation	NIHONWELD N-6020

E6022

SOURCE	PRODUCT
Chosun Steel Wire Company	CL-101
D&H Secheron Electrodes Limited	CELLUTHERME
Hobart Welding Products	HOBART 1139
Industrial Welding Corporation	NIHONWELD N-6022
Lincoln Electric Co.	Fleetweld 22

E6027

SOURCE	PRODUCT
American Welding Alloys	AWA 6027
D&H Secheron Electrodes Limited	DEEPEX
Electromanufacturas S.A	West Arco ZIP-27
ESAB AB	OK Femax 39.50
EXSA S.A. - División Soldaduras OERLIKON	Ferrocito 27
EXSA S.A.- División Fontargen	FON E 59
HYUNDAI WELDING PRODUCTS, INC.	S-6027.LF
Indura S.A. Industria y Comercio	FACILARC 15
Industrial Welding Corporation	NIHONWELD N-6027
Lincoln Electric Co.	Jetweld 2
Murex Welding Products	Murex 6027
Washington Alloy Company	USA 6027

E7014

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA 7014
Airco Filler Metals	EASY-ARC 7014

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E7014 (Continued from previous page)

SOURCE	PRODUCT
American Filler Metals Company	AFM 7014
American Welding Alloys	AWA 7014
Arcweld Products, Ltd.	EASYARC 14
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS R-116
Champion Welding Products	CHAMPION E7014
Chosun Steel Wire Company	CR-14
D&H Secheron Electrodes Limited	RAPIDEX
Electromanufacturas S.A	West Arco ZIP-14
ESAB AB	OK 46.16
ESAB WELDING & CUTTING PRODUCTS	SUREWELD SW-15IP
HARRIS WELCO	WELCO E7014
Hobart Welding Products	HOBART 14A
HYUNDAI WELDING PRODUCTS, INC.	S-7014.F
Indura S.A. Industria y Comercio	FACILARC 14
Industrial Welding Corporation	NIHONWELD N-7014
Inweld Corporation	INWELD 7014
Lincoln Electric Co.	Fleetweld 47, Easy-Arc 14
McKay Welding Products	MCKAY 7014
Messer - MG Systems & Welding Inc.	MG 7014
Murex Welding Products	Murex 7014
Nassau Research Corp.	Polaris
NATWELD	E7014
Stoody Company - Thermadyne Industries	Cigweld Ferrocraft 21
Uniweld Products, Inc.	UNI-7014
Washington Alloy Company	USA 7014
Weld Mold Company	204

E7015

SOURCE	PRODUCT
American Welding Alloys	AWA 7015
Champion Welding Products	CHAMPION E7015
Euroweld, Ltd.	E7015
Industrial Welding Corporation	NIHONWELD N-7015
Nassau Research Corp.	Polaris

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E7016

SOURCE	PRODUCT
Airco Filler Metals	EASY-ARC 7016
American Filler Metals Company	AFM 7016
American Welding Alloys	AWA 7016
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS B-268
CARBO-WELD Schweissmaterialien GmbH	CARBO BR 10 D
Champion Welding Products	CHAMPION E7016
D&H Secheron Electrodes Limited	INDOTHERME
Electromanufacturas S.A	West Arco WIZ-16
ELGA AB	P 47, P 47 D, P 47 P
ESAB AB	OK 53.00, 53.04, 53.05, 53.16, 53.68, 53.70
ESAB WELDING & CUTTING PRODUCTS	SUREWELD 70LA-2
Euroweld, Ltd.	E7016
EXSA S.A. - División Soldaduras OERLIKON	Univers
EXSA S.A.- División Fontargen	FON E 60
HILARIUS HAARLEM HOLLAND BV	HILCO Basic 55
HYUNDAI WELDING PRODUCTS, INC.	S-7016.G, S-7016.H, S-7016.LF, S-7016.M, S-7016.O
Indura S.A. Industria y Comercio	INDURA 7016
Industrial Welding Corporation	NIHONWELD N-7016
Kobe Steel, LTD.	LB-24, LB-26, LB-47, LB-50A, LB-52, LB-52A, LB-52U, LB-52UL, LBM-26, LBM-52, ZEROIDE-52, LB-57, BL-76
Lincoln Electric Co.	Jet-LH 7016, Lincoln 16P Baso 100, Conarc 51 (E7016-1)
Lincoln Electric Company (Australia) Pty Ltd	Jetweld LH-76, Shieldarc 7016
Murex Welding Products	Murex 7016
Sodel Ltd	Sodel 127
Washington Alloy Company	USA 7016

E7018

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA 7018, LA 18 PLUS, LA 18 LMP, LA EXCELARC 18, NUCLEARC 7018
Airco Filler Metals	EASY-ARC 7018 MR, 7018AC, CODE-ARC 7018 MR, 7018 N MR
American Filler Metals Company	AFM 7018, 7018-1
American Welding Alloys	AWA 7018
Arctec Alloys Limited	ARCTEC 224 (Super 18)
Arcweld Products, Ltd.	EASYARC 528MR (E7018-1), EASYARC 428MR (E7018-1),

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E7018 (Continued from previous page)

SOURCE	PRODUCT
	EASYARC 328(E7018-1), EASYARC 328 AC
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS B-248, AS B-255, AS B-204
Bohler Thyssen Welding USA, Inc.	UTP 614 Kb, Thyssen 120K
CARBO-WELD Schweissmaterialien GmbH	CARBO B 10
Champion Welding Products	CHAMPION E7018
Chosun Steel Wire Company	LC-318
Cronatron Welding Systems	Cronaweld E 7018
D&H Secheron Electrodes Limited	SUPRATHERME, SUPRATHERME (SPL)
Electromanufacturas S.A	West Arco WIZ-18, WIZ-18S; West Rode 09, 70 Básico
ELGA AB	P 48 P
ELGA AB	P 48 S, P 51, LB-52LT-18
ESAB AB	OK 48.00, 48.04, 48.05, 48.15, 48.18, 48.68, 55.00
ESAB WELDING & CUTTING PRODUCTS	ATOM ARC 7018, 7018-1, 7018-AC, 7018-SR
Euroweld, Ltd.	E7018, E7018-1
EXSA S.A. - División Soldaduras OERLIKON	SUPERCITO, SUPERCITO 18
EXSA S.A.- División Fontargen	FON E 61
HARRIS WELCO	WELCO E7018
HILARIUS HAARLEM HOLLAND BV	HILCO BASIC DIRECTA, BASIC SUPER (7018-1)
Hobart Welding Products	HOBART 418, 718MC, 18AC, Quantum Blue 7018-1
HYUNDAI WELDING PRODUCTS, INC.	S-7018.G
Indura S.A. Industria y Comercio	INDURA 7018-RH, 7018-CA
Industrial Welding Corporation	NIHONWELD N-7018
Inweld Corporation	INWELD 7018
Kobe Steel, LTD.	LB-52-18, LTB-52A
Lincoln Electric Co.	Jetweld LH-70, LH-73, LH-75 MR (E7018-1), Jet-LH 78 MR, Lincoln 7018 MR, Lincoln 7018AC, Lincoln LH 7018N MR, Lincoln 7018-1, Excalibur 7018, Excalibur 7018-1, Baso 120, Baso G (E7018-1), Baso 48SP (E7018-1), Conarc 49, Conarc 49C (E7018-1)
Lincoln Electric Co.	Optimarc, Formula 1-LH, Easy-Arc 328, 428 MR, 528 MR, 328 AC
Lincoln Electric Company (Australia) Pty Ltd	Jetweld LH-70, Jetweld LH-75 MR (E7018-1), Shieldarc 7018
McKay Welding Products	McKay 7018XLM, SOFT-ARC 7018-1, McKay 7018 AC
Messer - MG Systems & Welding Inc.	MG 7018, MG 518
Murex Welding Products	Murex B7018 MR, 7018 MR, 7018AC, Murex Speedex HTS-M MR, Murex Speedex HTS-N MR

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E7018 (Continued from previous page)

SOURCE	PRODUCT
Nassau Research Corp.	Polaris
NATWELD	E7018
Sodel Ltd	Sodel 318
Stoody Company - Thermadyne Industries	Cigweld Ferrocraft 61
Thermal Arc	Thermal Arc TA-18
Uniweld Products, Inc.	UNI-7018, UNI-7018AC
Washington Alloy Company	USA 7018, USA 7018-1

E7018M

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 7018M MR
American Welding Alloys	AWA 7018M
ELGA AB	P 48
ESAB WELDING & CUTTING PRODUCTS	ATOM ARC 7018-M
Euroweld, Ltd.	E7018M
Industrial Welding Corporation	NIHONWELD N-7018M
Lincoln Electric Co.	Lincoln 7018M MR
Murex Welding Products	Murex Speedex 7018M MR

E7024

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA 7024, LA 24 HD
Airco Filler Metals	EASY-ARC 7024
American Filler Metals Company	AFM 7024
American Welding Alloys	AWA 7024
Arcweld Products, Ltd.	EASYARC 12
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS DT-180, AS DT-165
CARBO-WELD Schweissmaterialien GmbH	CARBO RR 11
Champion Welding Products	CHAMPION E7024
Chosun Steel Wire Company	CR-24
D&H Secheron Electrodes Limited	FERROVITE
Electromanufacturas S.A	West Arco ZIP-24
ELGA AB	MAXETA 10, MAXETA 11, MAXETA 16
ELGA AB	MAXETA 11S
ESAB AB	OK Femax 33.60, 33.80

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E7024 (Continued from previous page)

SOURCE	PRODUCT
ESAB WELDING & CUTTING PRODUCTS	SUREWELD 7024; SUREWELD 7024-1
EXSA S.A. - División Soldaduras OERLIKON	Ferrocito 24
EXSA S.A.- División Fontargen	FON E 58
HILARIUS HAARLEM HOLLAND BV	HILCO Regina 150 (7024-1), Regina 160, Regina 180
Hobart Welding Products	HOBART 24
HYUNDAI WELDING PRODUCTS, INC.	S-7024.F
Indura S.A. Industria y Comercio	FACILARC 12, FACILARC 13
Industrial Welding Corporation	NIHONWELD N-7024
Inweld Corporation	INWELD 7024
Kobe Steel, LTD.	ZERODE-43F, ZERODE-50F
Lincoln Electric Co.	Jetweld 1 (E7024-1), Jetweld 3, Easy-Arc 12, Ferrod 120T, 135T, 160T, 185T, Ferrod 165A (E7024-1), Autoferrod 2 (E7024-1), Geofors
Lincoln Electric Company (Australia) Pty Ltd	Shieldarc 7024
McKay Welding Products	MCKAY 7024
Messer - MG Systems & Welding Inc.	MG 7024
Murex Welding Products	Murex 7024
Nassau Research Corp.	Polaris
Sodel Ltd	Sodel 314
Stoody Company - Thermadyne Industries	Cigweld Ferrocraft 22
Thermal Arc	Thermal Arc TA-24
Uniweld Products, Inc.	UNI-7024
Washington Alloy Company	USA 7024
Weld Mold Company	224

E7027

SOURCE	PRODUCT
ELGA AB	MAXETA 5, MAXETA 6
Industrial Welding Corporation	NIHONWELD N-7027
Kobe Steel, LTD.	ZERODE-27

E7028

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA 7028
Airco Filler Metals	EASY-ARC 7028
American Welding Alloys	AWA 7028

A5.1-91, CARBON STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.1-91, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding

E7028 (Continued from previous page)

SOURCE	PRODUCT
Arcweld Products, Ltd.	ARCWELD SUPER 28
Champion Welding Products	CHAMPION E7028
Chosun Steel Wire Company	LC-328
D&H Secheron Electrodes Limited	FERROVITE - B
Electromanufacturas S.A	West Arco ZIP-28
ELGA AB	MAXETA 20, MAXETA 21, MAXETA 22
ESAB AB	OK Femax 38.48, 38.65, 38.85, 38.95
ESAB WELDING & CUTTING PRODUCTS	ATOM ARC 7028
Euroweld, Ltd.	E7028
HILARIUS HAARLEM HOLLAND BV	HILCO Basic 160
HYUNDAI WELDING PRODUCTS, INC.	S-7028.F
Industrial Welding Corporation	NIHONWELD N-7028
Kobe Steel, LTD.	LB-52-28, LBF-52A, LBI-52H
Lincoln Electric Co.	Jetweld LH-3800, Conarc L150, V180
Murex Welding Products	Murex 7028
Washington Alloy Company	USA 7028

E7048

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 7048
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS B-235
ELGA AB	LB 52 T
ELGA AB	LB-26V, P 54
ESAB AB	OK 53.35
Euroweld, Ltd.	E7048
HYUNDAI WELDING PRODUCTS, INC.	S-7048.V
Industrial Welding Corporation	NIHONWELD N-7048
Kobe Steel, LTD.	LB-26V, LB-52T, LB-52V, ZERO-6V
Lincoln Electric Co.	Baso 26V
Murex Welding Products	Murex 7048
Washington Alloy Company	USA 7048

A5.2-92, CARBON AND LOW ALLOY Bare Gas Welding Rods

See ANSI/AWS A5.2-92, Specification for Carbon and Low Alloy Steel Rods for Oxyfuel Gas Welding

R45

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	HERCULES IRON
All-State Welding Products	RG45
American Filler Metals Company	AFM RG45
Champion Welding Products	CHAMPION R45
Crown Alloys Company	Crown #5
Electromanufacturas S.A	West Arco Velosol, West Rode West -Iron
ESAB WELDING & CUTTING PRODUCTS	OXWELD 7
EXSA S.A. - División Soldaduras OERLIKON	A-1C
EXSA S.A.- División Fontargen	FON A 100 GV0
HARRIS WELCO	WELCO W-1060
HILARIUS HAARLEM HOLLAND BV	HILCO Fer G1
Indura S.A. Industria y Comercio	INDURA 17
Inweld Corporation	INWELD RG-45
Lincoln Electric Co.	Lincoln R45
Nassau Research Corp.	Tartan
NATWELD	RG45
SOWESCO	Pinnacle Alloys R45
Uniweld Products, Inc.	STEEL 45
Washington Alloy Company	RG 45
WELDWIRE COMPANY INC.	RG45

R60

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA SUPERWELD
All-State Welding Products	RG60
American Filler Metals Company	AFM RG-60
Champion Welding Products	CHAMPION R60
Crown Alloys Company	Crown #4
ESAB AB	OK Gasrod 98.70
ESAB WELDING & CUTTING PRODUCTS	OXWELD 1HT
EXSA S.A. - División Soldaduras OERLIKON	A-2C
EXSA S.A.- División Fontargen	FON A 100 GVI
HARRIS WELCO	WELCO W-1200
HILARIUS HAARLEM HOLLAND BV	HILCO Fer G2, Fer G3, Fer G4
Inweld Corporation	INWELD RG-60

A5.2-92, CARBON AND LOW ALLOY Bare Gas Welding Rods

See ANSI/AWS A5.2-92, Specification for Carbon and Low Alloy Steel Rods for Oxyfuel Gas Welding

R60 (Continued from previous page)

SOURCE	PRODUCT
Lincoln Electric Co.	Lincoln R60
Nassau Research Corp.	Tartan
NATWELD	RG60
SOWESCO	Pinnacle Alloys R60
Uniweld Products, Inc.	STEEL 60
Washington Alloy Company	RG 60
WELDWIRE COMPANY INC.	WW RG60

R65

SOURCE	PRODUCT
AIR LIQUIDE CANADA INC.	LA Hi-Tensile
All-State Welding Products	RG65
American Filler Metals Company	AFM RG-65
Champion Welding Products	CHAMPION R65
D&H Secheron Electrodes Limited	FERROVITE-B
ESAB WELDING & CUTTING PRODUCTS	OXWELD 32CMS
EXSA S.A. - División Soldaduras OERLIKON	A-2 Mo C/P
EXSA S.A.- División Fontargen	FON A 100 GVII
Nassau Research Corp.	Tartan
SOWESCO	Pinnacle Alloys R65

A5.3-91, ALUMINUM AND ALUMINUM ALLOY Covered Arc Welding Electrodes

See ANSI/AWS A5.3-91, Specification for Aluminum and Aluminum Alloy Electrodes for Shielded Metal Arc Welding

E1100

SOURCE	PRODUCT
American Welding Alloys	AWA 1100
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS AL-99
CARBO-WELD Schweissmaterialien GmbH	CARBO AL 99,8
Champion Welding Products	CHAMPION E1100
Euroweld, Ltd.	E1100
HILARIUS HAARLEM HOLLAND BV	HILCO ALUMINIL 99,8
Lincoln Electric Co.	AI 99.8
Messer - MG Systems & Welding Inc.	E 1100
Washington Alloy Company	Aluminum 99FC

E3003

SOURCE	PRODUCT
Champion Welding Products	CHAMPION E3003
HILARIUS HAARLEM HOLLAND BV	HILCO ALUMINIL Mn
Messer - MG Systems & Welding Inc.	E 3003

E4043

SOURCE	PRODUCT
Airco Filler Metals	Airco 43
All-State Welding Products	34
American Filler Metals Company	Alum Arc
American Welding Alloys	AWA 4043
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS Alsi-5
CARBO-WELD Schweissmaterialien GmbH	CARBO AL Si 5
Champion Welding Products	CHAMPION E4043
COR-MET INC.	4043
Cronatron Welding Systems	Cronaweld E 4043
Crown Alloys Company	Royal 300
Electromanufacturas S.A	West Alum
Euroweld, Ltd.	E4043
EXSA S.A. - División Soldaduras OERLIKON	ALCORD 5 Si, EXSA 4043
EXSA S.A.- División Fontargen	FON E 406
HARRIS WELCO	WELCO 26
HILARIUS HAARLEM HOLLAND BV	HILCO ALUMINIL Si 5, ALUMINIL Si 12 (4047)
Inweld Corporation	INWELD A3AL

A5.3-91, ALUMINUM AND ALUMINUM ALLOY Covered Arc Welding Electrodes

See ANSI/AWS A5.3-91, Specification for Aluminum and Aluminum Alloy Electrodes for Shielded Metal Arc Welding

E4043 (Continued from previous page)

SOURCE	PRODUCT
Lincoln Electric Co.	Aluminweld 43, RepTec AlSi5
Messer - MG Systems & Welding Inc.	MG 400
Murex Welding Products	Murex 4043
Nassau Research Corp.	Neptune
NATWELD	ALUMINUM ELECTRODE
Oxford Alloys, Inc.	OXFORD E4043
Sodel Ltd	Sodel 18, Sodel 118
Uniweld Products, Inc.	UNI-4043
Washington Alloy Company	Aluminum 345
Weld Mold Company	11C
WELDWIRE COMPANY INC.	WW 4043

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E209-15

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 209-15
Euroweld, Ltd.	E209-15
Industrial Welding Corporation	NIHONWELD NSS-209D
Oxford Alloys, Inc.	OXFORD E209-15

E209-16

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 209-16
Industrial Welding Corporation	NIHONWELD NSS-209
Oxford Alloys, Inc.	OXFORD E209-16
Washington Alloy Company	USA 209-16 , Nitro 50 Coated
WELDWIRE COMPANY INC.	WW 209-16

E209-17

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 209-17
Industrial Welding Corporation	NIHONWELD NSS-209-17

E209-25

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 209-25
Euroweld, Ltd.	E209-25
Industrial Welding Corporation	NIHONWELD NSS-209-25

E209-26

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 209-26
Euroweld, Ltd.	E209-26
Industrial Welding Corporation	NIHONWELD NSS-209-26

E219-15

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 219-15
Industrial Welding Corporation	NIHONWELD NSS-219D
Oxford Alloys, Inc.	OXFORD E219-15

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E219-16

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 219-16
Industrial Welding Corporation	NIHONWELD NSS-219
Oxford Alloys, Inc.	OXFORD E219-16
Washington Alloy Company	USA 219-16, Nitro 40 Coated
WELDWIRE COMPANY INC.	WW 219-16

E219-17

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 219-17
Industrial Welding Corporation	NIHONWELD NSS-219-17

E219-25

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 219-25
Euroweld, Ltd.	E219-25
Industrial Welding Corporation	NIHONWELD NSS-219-25

E219-26

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 219-26
Euroweld, Ltd.	E219-26
Industrial Welding Corporation	NIHONWELD NSS-219-26

E240-15

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 240-15
Industrial Welding Corporation	NIHONWELD NSS-240D
Oxford Alloys, Inc.	OXFORD E240-15

E240-16

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 240-16
Industrial Welding Corporation	NIHONWELD NSS-240
Oxford Alloys, Inc.	OXFORD E240-16
Washington Alloy Company	USA 240-16, Nitro 35 Coated
WELDWIRE COMPANY INC.	WW 240-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E240-17

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 240-17
Industrial Welding Corporation	NIHONWELD NSS-240-17

E240-25

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 240-25
Euroweld, Ltd.	E240-25
Industrial Welding Corporation	NIHONWELD NSS-240-25

E240-26

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 240-26
Euroweld, Ltd.	E240-26
Industrial Welding Corporation	NIHONWELD NSS-240-26

E307-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E307-15
Champion Welding Products	CHAMPION E307-15
D&H Secheron Electrodes Limited	SIA
ELGA AB	CROMAROD 307 B
ESAB AB	OK 67.45
Euroweld, Ltd.	E307-15
Industrial Welding Corporation	NIHONWELD NSS-307D
Oxford Alloys, Inc.	OXFORD E307-15
Washington Alloy Company	USA 307-15
WELDWIRE COMPANY INC.	E307-15

E307-16

SOURCE	PRODUCT
American Welding Alloys	AWA 307-16
Arcos Alloys	Arcos E307-16
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS P-307S, AS P-308L
Champion Welding Products	CHAMPION E307-16
D&H Secheron Electrodes Limited	SIA (Rutile)
Electromanufacturas S.A	West Rode 201014

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E307-16 (Continued from previous page)

SOURCE	PRODUCT
Euroweld, Ltd.	E307-16
EXSA S.A. - División Soldaduras OERLIKON	CITORIEL 801
EXSA S.A.- División Fontargen	FON E 107
HILARIUS HAARLEM HOLLAND BV	HILCO Hilchrome 307 R
Industrial Welding Corporation	NIHONWELD NSS-307
Lincoln Electric Co.	RepTec 126
Messer - MG Systems & Welding Inc.	E307-16
Oxford Alloys, Inc.	OXFORD E307-16
Washington Alloy Company	USA 307-16, Armorweld 307
Weld Mold Company	307C
WELDWIRE COMPANY INC.	E307-16

E307-17

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-307-17

E307-25

SOURCE	PRODUCT
ESAB AB	OK 67.52
Euroweld, Ltd.	E307-25
Industrial Welding Corporation	NIHONWELD NSS-307-25

E307-26

SOURCE	PRODUCT
ELGA AB	ELGALOY MIX 18
Euroweld, Ltd.	E307-26
EXSA S.A.- División Fontargen	FON E 1107 H
Industrial Welding Corporation	NIHONWELD NSS-307-26

E308-15

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 308/308L-V MR
All-State Welding Products	308-15
Arcos Alloys	Arcos E308-15
Bohler Thyssen Welding USA, Inc.	UTP 68Kb
Champion Welding Products	CHAMPION E308-15

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308-15 (Continued from previous page)

SOURCE	PRODUCT
Crown Alloys Company	Crown 308-15
D&H Secheron Electrodes Limited	BATOX-A
Electromanufacturas S.A	Cromarco 308-15
EXSA S.A. - División Soldaduras OERLIKON	Inox A
Industrial Welding Corporation	NIHONWELD NSS-308-15
Lincoln Electric Co.	Stainweld 308-15, Red Baron 308/308L-V MR
McKay Welding Products	308/308H DC LIME
Murex Welding Products	Murex 308/308L-V MR
Oxford Alloys, Inc.	OXFORD E308-15
Sodel Ltd	Sodel 308-15
Washington Alloy Company	USA 308-15
Weld Mold Company	308-15
WELDWIRE COMPANY INC.	E308-15

E308-16

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 308/308H MR
All-State Welding Products	308-16
American Filler Metals Company	AFM 308-16
American Welding Alloys	AWA 308-16
Arcos Alloys	Arcos E308-16
Champion Welding Products	CHAMPION E308-16
Crown Alloys Company	Crown 308-16
D&H Secheron Electrodes Limited	RUTOX-A
Dytron Corporation	308-16
Electromanufacturas S.A	Cromarco 308-16
EXSA S.A. - División Soldaduras OERLIKON	Inox AW
HARRIS WELCO	WELCO E308-16
Hobart Welding Products	SMOOTHARC PLUS 308/308H-16
HYUNDAI WELDING PRODUCTS, INC.	S-308.16
Indura S.A. Industria y Comercio	INDURA 19-9
Industrial Welding Corporation	NIHONWELD NSS-308
Inweld Corporation	INWELD 308-16
Kobe Steel, LTD.	HIMELT-308, NC-38
Lincoln Electric Co.	Stainweld 308/308L-16, Red Baron 308/308H MR

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308-16 (Continued from previous page)

SOURCE	PRODUCT
McKay Welding Products	308/308H AC-DC
Messer - MG Systems & Welding Inc.	6308-16
Midalloy, Inc.	Chromax E308-16
Murex Welding Products	Murex 308/308H MR
Nassau Research Corp.	Gemini
NATWELD	E308-16
Nippon Welding Rod Co., Ltd.	WEL 308
NOF Corporation	RNY308, EN308
Oxford Alloys, Inc.	OXFORD E308-16
Sodel Ltd	Sodel 308-16
Stoody Company - Thermadyne Industries	Stoody 308-16
Techalloy Company, Inc.	RACO 308/308H
Uniweld Products, Inc.	UNI-308-16
Washington Alloy Company	BetterArc 308-16
Weld Mold Company	308-16
WELDWIRE COMPANY INC.	E308-16

E308-17

SOURCE	PRODUCT
Airco Filler Metals	DRAG'N-ARC 308/308L
All-State Welding Products	Smoothcote Plus 308L
Arcos Alloys	Arcos E308-17
Avesta Welding Products Inc.	AVESTA 308-17
Hobart Welding Products	DIAMOND ARC 308/308H-17
Industrial Welding Corporation	NIHONWELD NSS-308-17
Lincoln Electric Co.	Blue Max 308/308L AC-DC
McKay Welding Products	STERLING 308/308H-17
Murex Welding Products	Mur-Arc 308/308L
Nippon Welding Rod Co., Ltd.	WEL AZ 308
Oxford Alloys, Inc.	OXFORD E308-17
WELDWIRE COMPANY INC.	WW 308-17

E308-25

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-308-25

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308-26

SOURCE	PRODUCT
Airco Filler Metals	EASY-ARC 308 AC-DC
Industrial Welding Corporation	NIHONWELD NSS-308-26
Murex Welding Products	Ferrocure 308 AC-DC
Sodel Ltd	Sodel 308 HR

E308H-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E308H-15
Champion Welding Products	CHAMPION E308H-15
D&H Secheron Electrodes Limited	BATOX - AH
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308/308H-15
Euroweld, Ltd.	E308H-15, 16
Industrial Welding Corporation	NIHONWELD NSS-308HD
McKay Welding Products	308/308H DC LIME
Oxford Alloys, Inc.	OXFORD E308H-15
Sodel Ltd	Sodel 308H-15
Washington Alloy Company	USA 308H-15
WELDWIRE COMPANY INC.	E308H-15

E308H-16

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 308/308H MR
American Filler Metals Company	AFM 308H-16
American Welding Alloys	AWA 308H-16
Arcos Alloys	Arcos E308H-16
Bohler Thyssen Welding USA, Inc.	UTP 6820
Champion Welding Products	CHAMPION E308H-16
D&H Secheron Electrodes Limited	RUTOX - AH
Electromanufacturas S.A	Cromarco 308H-16; West Rode 4H
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308/308H-16
Euroweld, Ltd.	E308H-16
Hobart Welding Products	SMOOTHARC 308/308H-16
Industrial Welding Corporation	NIHONWELD NSS-308H
Lincoln Electric Co.	Red Baron 308/308H MR
McKay Welding Products	308/308H AC-DC

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308H-16 (Continued from previous page)

SOURCE	PRODUCT
Messer - MG Systems & Welding Inc.	6308H-16
Midalloy, Inc.	Chromax E308H-16
Murex Welding Products	Murex 308/308H MR
Nassau Research Corp.	Gemini
Nippon Welding Rod Co., Ltd.	WEL 308HTS
NOF Corporation	RNY308HT
Oxford Alloys, Inc.	OXFORD E308H-16
Sodel Ltd	Sodel 308H-16
Techalloy Company, Inc.	RACO 308/308H
Washington Alloy Company	USA 308H-16
WELDWIRE COMPANY INC.	E308H-16

E308H-17

SOURCE	PRODUCT
Arcos Alloys	Arcos E308H-17
Avesta Welding Products Inc.	AVESTA 308H-17
CARBO-WELD Schweissmaterialien GmbH	CARBO 4948 B
ELGA AB	CROMAROD 308 H
Hobart Welding Products	DIAMOND ARC 308/308H-17
Industrial Welding Corporation	NIHONWELD NSS-308H-17
McKay Welding Products	STERLING 308/308H-17
Oxford Alloys, Inc.	OXFORD E308H-17
WELDWIRE COMPANY INC.	WW 308H-17

E308H-25

SOURCE	PRODUCT
Euroweld, Ltd.	E308H-25
Industrial Welding Corporation	NIHONWELD NSS-308H-25

E308H-26

SOURCE	PRODUCT
Euroweld, Ltd.	E308H-26
Industrial Welding Corporation	NIHONWELD NSS-308H-26
Sodel Ltd	Sodel 308H HR

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308L-15

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 308/308L-V MR
All-State Welding Products	308L-15
Arcos Alloys	Arcos E308L-15
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS P-308L
Avesta Welding Products Inc.	AVESTA 308L-15
Bohler Thyssen Welding USA, Inc.	UTP 68 LCKb
Champion Welding Products	CHAMPION E308L-15
Chosun Steel Wire Company	NC-308L
Crown Alloys Company	Crown 308L-15
D&H Secheron Electrodes Limited	BATOX - B
Electromanufacturas S.A	Cromarco 308L-15
ESAB AB	OK 61.35
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308L-15
Euroweld, Ltd.	E308L-15
HILARIUS HAARLEM HOLLAND BV	HILCO Brown
Industrial Welding Corporation	NIHONWELD NSS-308LD
Inweld Corporation	INWELD 308L-15
Lincoln Electric Co.	Red Baron 308/308L-V MR
McKay Welding Products	308L DC LIME
Murex Welding Products	Murex 308/308L-V MR
Oxford Alloys, Inc.	OXFORD E308L-15
Sodel Ltd	Sodel 308L-15
Washington Alloy Company	USA 308L-15
Weld Mold Company	308L-15
WELDWIRE COMPANY INC.	E308L-15

E308L-16

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 308L MR
All-State Welding Products	308L-16
American Filler Metals Company	AFM308L-16
American Welding Alloys	AWA 308L-16
Arcos Alloys	Arcos E308L-16
Arctec Alloys Limited	ARCTEC E308L-16
Bohler Thyssen Welding USA, Inc.	UTP 6820 LC

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308L-16 (Continued from previous page)

SOURCE	PRODUCT
Champion Welding Products	CHAMPION E308L-16
Crown Alloys Company	Crown 308L-16
D&H Secheron Electrodes Limited	RUTOX - B
Dytron Corporation	308L-16
Electromanufacturas S.A	Cromarco 308L-16, 308L-16 Premium; West Rode 4L Básico
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308L-16
EXSA S.A. - División Soldaduras OERLIKON	Inox AW ELC
EXSA S.A.- División Fontargen	FON E 124
HARRIS WELCO	WELCO E308L-16 WELCO E308L-16 VERTICAL DOWN
HILARIUS HAARLEM HOLLAND BV	HILCO HILCHROME 304
Hobart Welding Products	SMOOTHARC PLUS 308L-16
HYUNDAI WELDING PRODUCTS, INC.	S-308L.16N
Indura S.A. Industria y Comercio	INDURA 308L
Industrial Welding Corporation	NIHONWELD NSS-308L
Inweld Corporation	INWELD 308L-16
Kobe Steel, LTD.	HIMELT-308L, NC-38L, NC-38LT, NC-38EL, NC-38ULC
Lincoln Electric Co.	Stainweld 308/308L-16, Red Baron 308L MR
McKay Welding Products	308L AC-DC
Messer - MG Systems & Welding Inc.	6308L-16
Midalloy, Inc.	Chromaz E308L-16
Murex Welding Products	Murex 308L MR
Nassau Research Corp.	Gemini
NATWELD	E308L-16
Nippon Welding Rod Co., Ltd.	WEL 308L, 308LA, 308ELC, 308ULC
NOF Corporation	RNY308L, 308L3, 308L2, 308LA, EN308L
Oxford Alloys, Inc.	OXFORD E308L-16
Sodel Ltd	Sodel 308L-16
Stoody Company - Thermadyne Industries	Stoody 308L-16
Techalloy Company, Inc.	RACO 308L
Uniweld Products, Inc.	UNI-308L-16
Washington Alloy Company	BetterArc 308L-16
Weld Mold Company	308L-16
WELDWIRE COMPANY INC.	E308L-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308L-17

SOURCE	PRODUCT
Airco Filler Metals	DRAG'N-ARC 308/308L
All-State Welding Products	Smoothcote Plus 308L
Arcos Alloys	Arcos E308L-17
Arctec Alloys Limited	ARCTEC E308L-17
Avesta Welding Products Inc.	AVESTA 308L-17
Bohler Thyssen Welding USA, Inc.	Bohler EAS 2-A, Thyssen JEW
CARBO-WELD Schweissmaterialien GmbH	CARBO 4316 AC
Crown Alloys Company	Crown 308L-17
ELGA AB	CROMAROD 308 LP, CROMAROD 308 L, CROMAROD 308 L-140
ELGA AB	CROMAROD 308LV
ESAB AB	OK 61.30
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308L-17 PLUS
HILARIUS HAARLEM HOLLAND BV	HILCO HILCHROME 308R
Hobart Welding Products	DIAMOND ARC 308L-17
Industrial Welding Corporation	NIHONWELD NSS-308L-17
Lincoln Electric Co.	Blue Max 308/308L AC-DC
McKay Welding Products	STERLING 308L-17
Murex Welding Products	Mur-Arc 308/308L
Nippon Welding Rod Co., Ltd.	WEL AZ 308L
Oxford Alloys, Inc.	OXFORD E308L-17
Techalloy Company, Inc.	RACO 308L
WELDWIRE COMPANY INC.	WW 308L-17

E308L-25

SOURCE	PRODUCT
Euroweld, Ltd.	E308L-25
Industrial Welding Corporation	NIHONWELD NSS-308L-25

E308L-26

SOURCE	PRODUCT
Euroweld, Ltd.	E308L-26
EXSA S.A.- División Fontargen	FON E 1124 H
Industrial Welding Corporation	NIHONWELD NSS-308L-26
Sodel Ltd	Sodel 308L HR, Sodel 130

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308Mo-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E308Mo-15
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS P-308Mo
Champion Welding Products	CHAMPION E308Mo-15
Industrial Welding Corporation	NIHONWELD NSS-308MoD
Oxford Alloys, Inc.	OXFORD E308Mo-15
Washington Alloy Company	USA 308Mo-15
WELDWIRE COMPANY INC.	E308Mo-15

E308Mo-16

SOURCE	PRODUCT
American Filler Metals Company	AFM 308Mo-16
American Welding Alloys	AWA 308Mo-16
Arcos Alloys	Arcos E308Mo-16
Champion Welding Products	CHAMPION E308Mo-16
ESAB AB	OK 63.32
Industrial Welding Corporation	NIHONWELD NSS-308Mo
Inweld Corporation	INWELD 308Mo-16
Oxford Alloys, Inc.	OXFORD E308Mo-16
Washington Alloy Company	USA 308Mo-16
WELDWIRE COMPANY INC.	E308Mo-16

E308Mo-17

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-308Mo-17

E308Mo-25

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-308Mo-25

E308Mo-26

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-308Mo-26

E308MoL-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E308MoL-15

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E308MoL-15 (Continued from previous page)

SOURCE	PRODUCT
Champion Welding Products	CHAMPION E308MoL-15
D&H Secheron Electrodes Limited	D&H-309 LMo, D&H 309 LMo-15
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308MoL-15
Industrial Welding Corporation	NIHONWELD NSS-208MoLD
Oxford Alloys, Inc.	OXFORD E308MoL-15
Washington Alloy Company	USA 308MoL-15
WELDWIRE COMPANY INC.	WW 308MoL-15

E308MoL-16

SOURCE	PRODUCT
American Filler Metals Company	AFM 308MoL-16
American Welding Alloys	AWA 308MoL-16
Arcos Alloys	Arcos E308MoL-16
Champion Welding Products	CHAMPION E308MoL-16
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 308MoL-16
Industrial Welding Corporation	NIHONWELD NSS-308MoL
Oxford Alloys, Inc.	OXFORD E308MoL-16
Washington Alloy Company	USA 308MoL-16
Weld Mold Company	308LMo-16
WELDWIRE COMPANY INC.	WW 308MoL-16

E308MoL-17

SOURCE	PRODUCT
CARBO-WELD Schweissmaterialien GmbH	CARBO 4431 AC
Industrial Welding Corporation	NIHONWELD NSS-308MoL-17

E308MoL-25

SOURCE	PRODUCT
Euroweld, Ltd.	E308MoL-25
Industrial Welding Corporation	NIHONWELD NSS-308MoL-25

E308MoL-26

SOURCE	PRODUCT
Euroweld, Ltd.	E308MoL-26
Industrial Welding Corporation	NIHONWELD NSS-308MoL-26

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309-15

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 309/309L-V MR
All-State Welding Products	309-15
Arcos Alloys	Arcos E309-15
Bohler Thyssen Welding USA, Inc.	UTP 6824 Kb
Champion Welding Products	CHAMPION E309-15
Crown Alloys Company	Crown 309-15
D&H Secheron Electrodes Limited	D&H 309-15
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309/309H-15
Industrial Welding Corporation	NIHONWELD NSS-309D
Lincoln Electric Co.	Red Baron 309/309L-V MR
McKay Welding Products	309 DC LIME
Murex Welding Products	Murex 309/309L-V MR
Oxford Alloys, Inc.	OXFORD E309-15
Sodel Ltd	Sodel 309-15
Washington Alloy Company	USA 309-15
Weld Mold Company	309-15
WELDWIRE COMPANY INC.	E309-15

E309-16

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 309/309L MR
All-State Welding Products	309-16
American Filler Metals Company	AFM 309-16
American Welding Alloys	AWA 309-16
Arcos Alloys	Arcos E309-16
Bohler Thyssen Welding USA, Inc.	UTP 6824
Crown Alloys Company	Crown 309-16
D&H Secheron Electrodes Limited	CRONITHERME-25/12
Dytron Corporation	309-16
Electromanufacturas S.A	Cromarco 309-16; West Rode 2212
ESAB AB	OK 67.62
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309/309H-16
EXSA S.A. - División Soldaduras OERLIKON	Inox 309
HARRIS WELCO	WELCO E309-16
Hobart Welding Products	SMOOTHARC PLUS 309-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309-16 (Continued from previous page)

SOURCE	PRODUCT
HYUNDAI WELDING PRODUCTS, INC.	S-309.16N
Industrial Welding Corporation	NIHONWELD NSS-309
Inweld Corporation	INWELD 309-16
Kobe Steel, LTD.	HIMELT-309, NC-39, NCA-309
Lincoln Electric Co.	Stainweld 309-16, Red Baron 309/309L MR
McKay Welding Products	309 AC-DC
Messer - MG Systems & Welding Inc.	6309-16
Midalloy, Inc.	Chromax E309-16
Murex Welding Products	Murex 309/309L MR
Nassau Research Corp.	Brutus
NATWELD	E309-16
Nippon Welding Rod Co., Ltd.	WEL 309
NOF Corporation	RNY309, 309A, EN309
Oxford Alloys, Inc.	OXFORD E309-16
Sodel Ltd	Sodel 309-16
Stoody Company - Thermadyne Industries	Stoody 309-16
Techalloy Company, Inc.	RACO 309
Uniweld Products, Inc.	UNI-309-16
Washington Alloy Company	BetterArc 309-16
Weld Mold Company	309-16
WELDWIRE COMPANY INC.	E309-16

E309-17

SOURCE	PRODUCT
Airco Filler Metals	DRAG'N-ARC 309/309L
All-State Welding Products	Smoothcote Plus 309L
Arcos Alloys	Arcos E309-17
Avesta Welding Products Inc.	AVESTA 309-17
Hobart Welding Products	DIAMOND ARC 309-17
Industrial Welding Corporation	NIHONWELD NSS-309-17
Lincoln Electric Co.	Blue Max 309/309L AC-DC
McKay Welding Products	STERLING 309-17
Murex Welding Products	Mur-Arc 309/309L
Nippon Welding Rod Co., Ltd.	WEL AZ 309
Oxford Alloys, Inc.	OXFORD E309-17

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309-17 (Continued from previous page)

SOURCE	PRODUCT
WELDWIRE COMPANY INC.	WW 309-17

E309-25

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-309-25

E309-26

SOURCE	PRODUCT
ELGA AB	CROMAROD 309 S
Industrial Welding Corporation	NIHONWELD NSS-309-26
Sodel Ltd	Sodel 309 HR, Sodel 309 HP

E309L-15

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 309/309L-V MR
Arcos Alloys	Arcos E309L-15
Champion Welding Products	CHAMPION E309L-15
Chosun Steel Wire Company	NC-309L
Crown Alloys Company	Crown 309L-15
D&H Secheron Electrodes Limited	D&H 309L-15
ESAB AB	OK 67.75
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309L-15
Euroweld, Ltd.	E309L-15
Industrial Welding Corporation	NIHONWELD NSS-309LD
Inweld Corporation	INWELD 309L-15
Lincoln Electric Co.	Red Baron 309/309L-V MR
McKay Welding Products	MCKAY 309L-15, 309L DC LIME
Murex Welding Products	Murex 309/309L-V MR
Oxford Alloys, Inc.	OXFORD E309L-15
Sodel Ltd	Sodel 309L-15
Washington Alloy Company	USA 309L-15
WELDWIRE COMPANY INC.	E309L-15

E309L-16

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 309/309L MR

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309L-16 (Continued from previous page)

SOURCE	PRODUCT
All-State Welding Products	309L-16
American Filler Metals Company	AFM 309L-16
American Welding Alloys	AWA 309L-16
Arcos Alloys	Arcos E309L-16
Arctec Alloys Limited	ARCTEC E309L-16
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS P-309L
Bohler Thyssen Welding USA, Inc.	UTP 6824 LC
Champion Welding Products	CHAMPION E309L-16
Crown Alloys Company	Crown 309L-16
D&H Secheron Electrodes Limited	D&H 309L
Dytron Corporation	309L-16
Electromanufacturas S.A	Cromarco 309L-16 Premium
ESAB AB	OK 67.60
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309L-16
EXSA S.A. - División Soldaduras OERLIKON	Inox 309ELC
EXSA S.A.- División Fontargen	FON E 132
HARRIS WELCO	WELCO E309L-16
HILARIUS HAARLEM HOLLAND BV	HILCO HILCHROME 309 S
Hobart Welding Products	SMOOTHARC PLUS 309L-16
HYUNDAI WELDING PRODUCTS, INC.	S-309L.16N
Indura S.A. Industria y Comercio	INDURA 309L
Industrial Welding Corporation	NIHONWELD NSS-309L
Inweld Corporation	INWELD 309L-16
Kobe Steel, LTD.	HIMELT-309L, NC-39L
Lincoln Electric Co.	Red Baron 309/309L MR
McKay Welding Products	309L AC-DC
Messer - MG Systems & Welding Inc.	6309L-16
Midalloy, Inc.	Chromax E309L-16
Murex Welding Products	Murex 309/309L MR
Nassau Research Corp.	Brutus
NATWELD	E309L-16
Nippon Welding Rod Co., Ltd.	WEL 309L
NOF Corporation	RNY309L, RNY309L2, EN309L
Oxford Alloys, Inc.	OXFORD E309L-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309L-16 (Continued from previous page)

SOURCE	PRODUCT
Sodel Ltd	Sodel 309L-16
Stoody Company - Thermadyne Industries	Stoody 309L-16 Series II
Techalloy Company, Inc.	RACO 309L
Uniweld Products, Inc.	UNI-309L-16
Washington Alloy Company	BetterArc 309L-16
Weld Mold Company	309L-16
WELDWIRE COMPANY INC.	E309L-16

E309L-17

SOURCE	PRODUCT
Airco Filler Metals	DRAG'N-ARC 309/309L
All-State Welding Products	Smoothcote Plus 309L
Arcos Alloys	Arcos E309L-17
Arctec Alloys Limited	ARCTEC E309L-17
Avesta Welding Products Inc.	AVESTA 309L-17
Bohler Thyssen Welding USA, Inc.	Bohler CN 23/12-A, Thyssen 25/14EW
CARBO-WELD Schweissmaterialien GmbH	CARBO 4332 AC
Crown Alloys Company	Crown 309L-17
ELGA AB	CROMAROD 309 L, CROMAROD 309 MoL
ELGA AB	CROMAROD 309L-140
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309L-17 PLUS
HILARIUS HAARLEM HOLLAND BV	HILCO HILCHROME 309 R
Hobart Welding Products	DIAMOND ARC 309L-17
Industrial Welding Corporation	NIHONWELD NSS-309L-17
Lincoln Electric Co.	Blue Max 309/309L AC-DC
McKay Welding Products	STERLING 309L-17
Murex Welding Products	Mur-Arc 309/309L
Nippon Welding Rod Co., Ltd.	WEL AZ 309L
Oxford Alloys, Inc.	OXFORD E309L-17
Techalloy Company, Inc.	RACO 309L
WELDWIRE COMPANY INC.	WW 309L-17

E309L-25

SOURCE	PRODUCT
Euroweld, Ltd.	E309L-25

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309L-25 (Continued from previous page)

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-309L-25

E309L-26

SOURCE	PRODUCT
Euroweld, Ltd.	E309L-26
Industrial Welding Corporation	NIHONWELD NSS-309L-26
Sodel Ltd	Sodel 309L HR

E309Cb-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E309Cb-15
Champion Welding Products	CHAMPION E309Cb-15
D&H Secheron Electrodes Limited	D&H 309 Cb-15
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309Cb-15
Euroweld, Ltd.	E309Nb-15, 16
Industrial Welding Corporation	NIHONWELD NSS-309CbD
Oxford Alloys, Inc.	OXFORD E309Cb-15
SOWESCO	Pinnacle Alloys E309Cb-15
Washington Alloy Company	
WELDWIRE COMPANY INC.	E309Cb-15

E309Cb-16

SOURCE	PRODUCT
American Filler Metals Company	AFM 309Cb-16
American Welding Alloys	AWA 309Cb-16
Arcos Alloys	Arcos E309Cb-16
Bohler Thyssen Welding USA, Inc.	Thyssen 24/12ENbW, UTP 6824 Nb
Champion Welding Products	CHAMPION E309Cb-16
D&H Secheron Electrodes Limited	D&H 309 Cb
Electromanufacturas S.A	Cromarco 309Cb-16
ESAB AB	OK 67.68
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309Cb-16
HYUNDAI WELDING PRODUCTS, INC.	S-309Cb.16
Industrial Welding Corporation	NIHONWELD NSS-309Cb
Inweld Corporation	INWELD 309Cb-16
Messer - MG Systems & Welding Inc.	6309Cb-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309Cb-16 (Continued from previous page)

SOURCE	PRODUCT
Nippon Welding Rod Co., Ltd.	WEL 309Nb
NOF Corporation	RNY309Cb
Oxford Alloys, Inc.	OXFORD E309Cb-16
Stoody Company - Thermadyne Industries	Stoody 309CbL-16
Washington Alloy Company	USA 309Cb-16
WELDWIRE COMPANY INC.	E309Cb-16

E309Cb-17

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-309Cb-17

E309Cb-25

SOURCE	PRODUCT
Euroweld, Ltd.	E309Cb-25
Industrial Welding Corporation	NIHONWELD NSS-309Cb-25

E309Cb-26

SOURCE	PRODUCT
Euroweld, Ltd.	E309Cb-26
Industrial Welding Corporation	NIHONWELD NSS-309Cb-26

E309Mo-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E309Mo-15
Champion Welding Products	CHAMPION E309Mo-15
D&H Secheron Electrodes Limited	D&H 309 Mo-15
Industrial Welding Corporation	NIHONWELD NSS-309MoD
Oxford Alloys, Inc.	OXFORD E309Mo-15
Washington Alloy Company	USA 309Mo-15
WELDWIRE COMPANY INC.	E309Mo-15

E309Mo-16

SOURCE	PRODUCT
American Filler Metals Company	AFM 309Mo-16
American Welding Alloys	AWA 309Mo-16
Arcos Alloys	Arcos E309Mo-16
Champion Welding Products	CHAMPION E309Mo-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309Mo-16 (Continued from previous page)

SOURCE	PRODUCT
D&H Secheron Electrodes Limited	D&H 309 Mo
Electromanufacturas S.A	Cromarco 309Mo-16; West Rode 2212 Mo
Euroweld, Ltd.	E309Mo-15
EXSA S.A.- División Fontargen	FON E 138 Mo
HILARIUS HAARLEM HOLLAND BV	HILCO HILCHROME 309Mo
HYUNDAI WELDING PRODUCTS, INC.	S-309Mo.16
Industrial Welding Corporation	NIHONWELD NSS-309Mo
Inweld Corporation	INWELD 309Mo-16
McKay Welding Products	MCKAY 309Mo-16
Messer - MG Systems & Welding Inc.	6309Mo-16
Midalloy, Inc.	Chromax E309Mo-16
Nassau Research Corp.	Brutus
Nippon Welding Rod Co., Ltd.	WEL 309Mo
NOF Corporation	RNY309Mo, EN309Mo
Oxford Alloys, Inc.	OXFORD E309Mo-16
Washington Alloy Company	USA 309Mo-16
Weld Mold Company	309LMo-16
WELDWIRE COMPANY INC.	E309Mo-16

E309Mo-17

SOURCE	PRODUCT
ELGA AB	CROMAROD 309 MoL-150
ELGA AB	CROMAROD 309MoLP
Industrial Welding Corporation	NIHONWELD NSS-309Mo-17

E309Mo-25

SOURCE	PRODUCT
Industrial Welding Corporation	NIHONWELD NSS-309Mo-25

E309Mo-26

SOURCE	PRODUCT
ELGA AB	CROMAROD 309 MoL-S
ELGA AB	CROMAROD 309MoL-S
EXSA S.A.- División Fontargen	FON E 109 S
Industrial Welding Corporation	NIHONWELD NSS-309Mo-26

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309MoL-15

SOURCE	PRODUCT
Arcos Alloys	Arcos E309MoL-15
Avesta Welding Products Inc.	AVESTA P5 BASIC
Champion Welding Products	CHAMPION E309MoL-15
D&H Secheron Electrodes Limited	D&H 309L Mo-15
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309MoL-15
Euroweld, Ltd.	E309MoL-15
Industrial Welding Corporation	NIHONWELD NSS-309MoLD
Oxford Alloys, Inc.	OXFORD E309MoL-15
Washington Alloy Company	USA 309MoL-15
WELDWIRE COMPANY INC.	WW E309MoL-15

E309MoL-16

SOURCE	PRODUCT
American Filler Metals Company	AFM 309MoL-16
American Welding Alloys	AWA 309MoL-16
Arcos Alloys	Arcos E309MoL-16
Bohler Thyssen Welding USA, Inc.	Thyssen 23/11MoZLW, UTP 6824 MoLC
Champion Welding Products	CHAMPION E309MoL-16
D&H Secheron Electrodes Limited	D&H 309L Mo
Electromanufacturas S.A	Cromarco 309MoL-16 Premium
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 309MoL-16
Indura S.A. Industria y Comercio	INDURA 309 MoL
Industrial Welding Corporation	NIHONWELD NSS-309MoL
Inweld Corporation	INWELD 309L Mo-16
Kobe Steel, LTD.	NC-39MoL
Lincoln Electric Co.	Red Baron 309MoL MR
McKay Welding Products	309MoL AC-DC
Messer - MG Systems & Welding Inc.	6309MoL-16
Nippon Welding Rod Co., Ltd.	WEL 309MoL
NOF Corporation	RNY309MoL, 309MoL2
Oxford Alloys, Inc.	OXFORD E309MoL-16
Sodel Ltd	Sodel 309L Mo-16
Stoody Company - Thermadyne Industries	Stoody 309MoL-16
Washington Alloy Company	USA 309MoL-16
WELDWIRE COMPANY INC.	WW 309MoL-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E309MoL-17

SOURCE	PRODUCT
Avesta Welding Products Inc.	AVESTA P5
CARBO-WELD Schweissmaterialien GmbH	CARBO 4459 AC
ESAB AB	OK 67.70
HILARIUS HAARLEM HOLLAND BV	HILCO HILCHROME 309Mo R
Industrial Welding Corporation	NIHONWELD NSS-309MoL-17
Nippon Welding Rod Co., Ltd.	WEL AZ 309MoL
Oxford Alloys, Inc.	OXFORD E309MoL-17

E309MoL-25

SOURCE	PRODUCT
Euroweld, Ltd.	E309MoL-25
Industrial Welding Corporation	NIHONWELD NSS-309MoL-25

E309MoL-26

SOURCE	PRODUCT
Euroweld, Ltd.	E309MoL-26
Industrial Welding Corporation	NIHONWELD NSS-309MoL-26

E310-15

SOURCE	PRODUCT
All-State Welding Products	310-15
Arcos Alloys	Arcos E310-15
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS P-310B
Astrolite Alloys	Astrolite 310-15
Avesta Welding Products Inc.	AVESTA 310-15
Champion Welding Products	CHAMPION E310-15
Cronatron Welding Systems	Cronaweld 310
Crown Alloys Company	Crown 310-15
D&H Secheron Electrodes Limited	D&H 310-15
ESAB AB	OK 67.15
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 310-15
Euroweld, Ltd.	E310-15
Industrial Welding Corporation	NIHONWELD NSS-310D
Inweld Corporation	INWELD 310-15
Oxford Alloys, Inc.	OXFORD E310-15
Washington Alloy Company	USA 310-15

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E310-15 (Continued from previous page)

SOURCE	PRODUCT
Weld Mold Company	310-15
WELDWIRE COMPANY INC.	E310-15

E310-16

SOURCE	PRODUCT
Airco Filler Metals	CODE-ARC 310 MR
All-State Welding Products	310-16
American Filler Metals Company	AFM 310-16
American Welding Alloys	AWA 310-16
Arcos Alloys	Arcos E310-16
Arctec Alloys Limited	ARCTEC E310-16
Askaynak Kaynak Teknigi Sanayi Ticaret A.S.	AS P-310R
Astrolite Alloys	Astrolite 310-16
Bohler Thyssen Welding USA, Inc.	UTP 68H
Champion Welding Products	CHAMPION E310-16
Crown Alloys Company	Crown 310-16
D&H Secheron Electrodes Limited	D&H 310-16
Dytron Corporation	310-16
Electromanufacturas S.A	Cromarco 310-16; West Rode 5
ESAB AB	OK 67.13
ESAB WELDING & CUTTING PRODUCTS	ARCALOY 310-16
Euroweld, Ltd.	E310-16
EXSA S.A. - División Soldaduras OERLIKON	INOX CW
EXSA S.A.- División Fontargen	FON E 126
HARRIS WELCO	WELCO E310-16
HILARIUS HAARLEM HOLLAND BV	HILCO Hilchrome 310 R
Hobart Welding Products	SMOOTHARC PLUS 310-16
HYUNDAI WELDING PRODUCTS, INC.	S-310.16
Indura S.A. Industria y Comercio	INDURA 25-20
Industrial Welding Corporation	NIHONWELD NSS-310
Inweld Corporation	INWELD 310-16
Kobe Steel, LTD.	NC-30
Lincoln Electric Co.	Stainweld 310-16, Red Baron 310 MR, RepTec 46
McKay Welding Products	310 AC-DC
Messer - MG Systems & Welding Inc.	6310-16

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E310-16 (Continued from previous page)

SOURCE	PRODUCT
Midalloy, Inc.	Chromax E310-16
Murex Welding Products	Murex 310 MR
Nassau Research Corp.	Gemini
NATWELD	E310-16
Nippon Welding Rod Co., Ltd.	WEL 310
NOF Corporation	RNY310
Oxford Alloys, Inc.	OXFORD E310-16
Sodel Ltd	Sodel 310-16
Stoody Company - Thermadyne Industries	Stoody 310-16
Techalloy Company, Inc.	RACO 310
Uniweld Products, Inc.	UNI-310-16
Washington Alloy Company	USA 310-16
Weld Mold Company	310-16
WELDWIRE COMPANY INC.	E310-16

E310-17

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 310-17
Avesta Welding Products Inc.	AVESTA 310-17
CARBO-WELD Schweissmaterialien GmbH	CARBO 4842 AC
ELGA AB	CROMAROD 310
Industrial Welding Corporation	NIHONWELD NSS-310-17
Oxford Alloys, Inc.	OXFORD E310-17

E310-25

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 310-25
Euroweld, Ltd.	E310-25
Industrial Welding Corporation	NIHONWELD NSS-310-25

E310-26

SOURCE	PRODUCT
Astrolite Alloys	Astrolite 310-26
Euroweld, Ltd.	E310-26
EXSA S.A.- División Fontargen	FON E 1126 H
Industrial Welding Corporation	NIHONWELD NSS-310-26

A5.4-92, STAINLESS STEEL Covered Arc Welding Electrodes

See ANSI/AWS A5.4-92, Specification for Stainless Steel Welding Electrodes for Shielded Metal Arc Welding

E310H-15	
SOURCE	PRODUCT
Arcos Alloys	Arcos E310H-15
Astrolite Alloys	Astrolite 310H-15
Bohler Thyssen Welding USA, Inc.	Thyssen CR
CARBO-WELD Schweissmaterialien GmbH	CARBO 4846 B
Champion Welding Products	CHAMPION E310H-15
D&H Secheron Electrodes Limited	D&H-310 HC
ESAB AB	OK 67.26
Euroweld, Ltd.	E310H-15
Industrial Welding Corporation	NIHONWELD NSS-310HD
Inweld Corporation	INWELD 310HC-15
Oxford Alloys, Inc.	OXFORD E310H-15
Sodel Ltd	Sodel 310HC-15
Washington Alloy Company	USA 310H-15
Weld Mold Company	310HC-15
WELDWIRE COMPANY INC.	E310HC-15

E310H-16	
SOURCE	PRODUCT
American Welding Alloys	AWA 310H-16
Arcos Alloys	Arcos E310H-16
Astrolite Alloys	Astrolite 310H-16
Champion Welding Products	CHAMPION E310H-16
D&H Secheron Electrodes Limited	D&H 310 HC
Industrial Welding Corporation	NIHONWELD NSS-310H
Messer - MG Systems & Welding Inc.	6310H-16
Midalloy, Inc.	Chromax E310HC-16
Nassau Research Corp.	Gemini
Oxford Alloys, Inc.	OXFORD E310H-16
Techalloy Company, Inc.	RACO 310HC
Washington Alloy Company	USA 310H-16
Weld Mold Company	310HC-16
WELDWIRE COMPANY INC.	E310HC-16