

COMMON ARC WELDING – Mild Steel and Low Hydrogen/Low Alloy Electrodes



MILD & LOW ALLOY STEEL
ELECTRODE INFORMATION

PROPERTIES MILD & LOW
ALLOY STEEL ELECTRODES

USA 7014 AWS A5.1 Class E7014

ALL SIZES \$2.50 PER 1 lb. Pk.	ALL SIZES \$20.00 PER 10 lb. Pack.	60 LB in *Standard CONTAINER		
SIZE	PART No.	PART No.	PART No.	PRICE
3/32	7014-332-1	7014-332-10	7014-332-60	\$90.00
1/8	7014-18-1	7014-18-10	7014-18-60	\$85.00
5/32	7014-532-1	7014-532-10	7014-532-60	\$85.00
3/16	7014-316-1	7014-316-10	7014-316-60	\$85.00

*A (60 lb.) Moisture Resistant Container,
houses 6 resealable 10 lb plastic packages

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ON LARGE DIAMETER
ELECTRODES**

DESCRIPTION

USA 7014 is an iron powder, rutile type electrode designed to operate at higher speeds and with greater deposition efficiency than USA 6012 or USA 6013 electrodes. This electrode provides a stable arc, flat smooth bead appearance and easy slag removability. USA 7014 is used for all position, single-pass and multi-layer welding applications. AC or DC (straight or reverse polarity) may be used.

TYPICAL APPLICATIONS

USA 7014 is an all-purpose electrode used wherever the welding efficiency of USA 6012 or USA 6013 is not acceptable. Typical applications would include: ship structures, bridges, structural steels for buildings, sheet metal, ornamental iron, auto bodies and fenders, machine parts, storage tanks, etc.

TYPICAL WELD METAL CHEMISTRY (%)

C	0.080
Mn	0.600
Si	0.350
P	0.017
S	0.010

TYPICAL MECHANICAL PROPERTIES OF WELD DEPOSIT (as welded)

Yield point (psi)	69,000
Tensile strength (psi)	79,000
Elongation in 2" (%)	30
Charpy V-notch at 32°F (ft. lbs.)	58
Reduction in area (%)	44

AVAILABLE SIZES AND RECOMMENDED CURRENTS (AC or DC±)

Dia. (in.)	3/32	1/8	5/32	3/16	7/32	1/4
Lgth. (in.)	14	14	14	14	14	14
Amps F	50-100	90-140	150-210	200-240	210-270	250-320
Amps V&O	40-65	60-90	110-160	120-160	-	-

**USA 7018 AWS A5.1 Class E7018

ALL SIZES \$2.50 PER 1 lb. Pack	ALL SIZES \$20.00 PER 10 lb. Pack.	60 LB in *Standard CONTAINER		
SIZE	PART No.	PART No.	PART No.	PRICE
3/32	7018-332-1	7018--332-10	7018--332-60	\$90.00
1/8	7018--18-1	7018--18-10	7018--18-60	\$85.00
5/32	7018--532-1	7018--532-10	7018--532-60	\$85.00
3/16	7018--316-1	7018--316-10	7018--316-60	\$85.00

Also meets the requirements of E7018M

10 LB in Hermetically Sealed METAL CONTAINER			50 LB in Hermetically Sealed METAL CONTAINER	
SIZE	PART No.	PRICE	PART No.	PRICE
3/32	7018-332-H10	\$35.00	7018--332-H50	\$95.00
1/8	7018--18-H10	\$25.00	7018--18-H50	\$90.00
5/32	7018--532-H10	\$25.00	7018--532-H50	\$90.00
3/16	7018--316-H10	\$25.00	7018--316-H50	\$90.00

DESCRIPTION

USA 7018 is the most efficient general purpose, iron powder - low hydrogen electrode used for welding carbon steels, free-machining steels and low alloy steels with a minimum yield strength of 50,000 psi. USA 7018 has a very good deposition rate, providing a quiet steady arc with low spatter and medium penetration. Weld deposits are of X-ray quality with easy slag removal, exceptional mechanical properties and a smooth uniform bead appearance. USA 7018 has excellent operator appeal and may be used in any position with AC or DC (reverse polarity).

TYPICAL APPLICATIONS

USA 7018 electrodes are used for many ASTM specifications. More specific applications would include process piping, cold rolled steels such as found in heavy machinery fabrications, fired and unfired pressure vessels, shop and field welding of bridges and structural steels, cast steels, shipbuilding, just about any medium carbon, low alloy steel where the welds are subject to X-ray inspection.

TYPICAL WELD METAL CHEMISTRY (%)

C	0.070
Mn	0.970
Si	0.570
P	0.012
S	0.011

TYPICAL MECHANICAL PROPERTIES OF WELD DEPOSIT (as welded)

Yield point (psi)	72,000
Tensile strength (psi)	86,000
Elongation in 2" (%)	31
Charpy V-notch at -20°F (ft. lbs.)	65

AVAILABLE SIZES AND RECOMMENDED CURRENTS (AC or DC±)

Dia. (in.)	3/32	1/8	5/32	3/16	7/32	1/4
Lgth. (in.)	14	14	14	14	18	18
Amps F	55-85	90-140	130-185	190-250	230-285	250-320
Amps V&O	50-80	80-120	110-180	160-210	-	-

**USA 7018-A1 also available (see next page)

USA 7024 AWS A5.1 Class E7024

ALL SIZES \$2.50 PER 1 lb. Pk.	ALL SIZES \$20.00 PER 10 lb. Pack.	60 LB in *Standard CONTAINER		
SIZE	PART No.	PART No.	PART No.	PRICE
3/32	7024-332-1	7024-332-10	7024-332-60	\$90.00
1/8	7024-18-1	7024-18-10	7024-18-60	\$85.00
5/32	7024-532-1	7024-532-10	7024-532-60	\$85.00
3/16	7024-316-1	7024-316-10	7024-316-60	\$85.00

DESCRIPTION

USA 7024 is an iron powder, rutile coated electrode designed for high speed, single pass horizontal and flat fillet welding of mild steel. This electrode provides greater deposition efficiency and better physical properties than USA 7014 electrodes. USA 7024 offers a quiet stable arc and produces weld deposits with low spatter, free of undercuts and a "self-removing" slag. Bead appearance is superb. This electrode may be used with AC or DC (straight or reverse polarity).

TYPICAL APPLICATIONS

Ship structures, bridges, structural steels, machine bases, truck fabrication, storage tanks and rolling stocks.

TYPICAL WELD METAL CHEMISTRY (%)

C	0.090
Mn	0.780
Si	0.350
P	0.019
S	0.014

TYPICAL MECHANICAL PROPERTIES OF WELD DEPOSIT (as welded)

Yield point (psi)	70,000
Tensile strength (psi)	83,000
Elongation in 2" (%)	28
Charpy V-notch at 32°F (ft. lbs.)	51
Reduction in area (%)	40

AVAILABLE SIZES AND RECOMMENDED CURRENTS (AC or DC±)

Dia. (in.)	3/32	1/8	5/32	3/16	7/32	1/4
Lgth. (in.)	14	14-18	14-18	18-28	18-28	18-28
Amps F	60-100	120-170	140-190	200-250	230-270	280-380

**Large Volume?
Call For Quote**