

ER70S-2

Specifications: AISI/AWS A5.18, ASME SFA 5.18

Classification: ER70S-2

Type of power: GMAW-DCEP, GTAW-DCEN

Description:

ER70S-2 is a premium welding wire designed for welding on all grades of mild and carbon steel, producing quality welds with minimal porosity. 70S-2 is also a triple deoxidized wire (Zirconium, Titanium, and Aluminum) making it an excellent choice for welding over rust and mill scale.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07 max	0.15 max	0.15 max	0.90- 1.40	0.40- 0.70	0.025 max
S	Cu	Mo	V	Al	Ti
0.035 max	0.50 max	0.15 max	0.03 max	0.05- 0.15	0.05- 0.15
Fe	Zr				
bal.	0.02- 0.12				

Typical Mechanical Properties*	
Tensile Strength	78,000 psi
Yield Strength	60,000 psi
Elongation in 2"	25 %

*using 98%Ar/2%O₂

ER70S-3

Specifications: AISI/AWS A5.18, ASME SFA 5.18

Classification: ER 70S-3

Type of power: GMAW-DCEP, GTAW-DCEN

Description:

ER70S-3 is a premium mild steel solid wire, with silicon and manganese levels suitable for general purpose welding over clean to light levels of rust and mill scale. 70S-3 has the flexibility to provide trouble-free performance in heavy-duty, high-speed spray or pulse applications to lighter duty, lower speed short-arc applications. GMAW is designed for use with various gas mixtures such as CO₂, 75/25 Ar/CO₂ or 98/2 Ar/O₂. 70S-3 produces a smooth stable arc with low spatter, producing a weld bead that ties in evenly with the sides and has a smooth finished appearance.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
.06-.15	0.15 max	0.15 max	0.90- 1.40	0.45- 0.75	0.025 max
S	Cu	Mo	V	Fe	Other
.035 max	.50 max	0.15 max	0.03 max	bal.	.50 max

Typical Mechanical Properties*	
Tensile Strength	82,000 psi
Yield Strength	65,000 psi
Elongation in 2"	24 %

*using 98%Ar/2%O₂

ER70S-6

Specifications: AISI/AWS A5.18, ASME SFA 5.18

Classification: ER70S-6

Type of power: GMAW-DCEP, GTAW-DCEN

Description:

ER70S-6 is a premium mild steel solid wire formulated to provide high quality welds and trouble-free performance from heavy duty, high speed, spray transfer applications all the way to light duty low speed, short-arc applications. 70S-6 GMAW is designed for use with various gas mixtures such as 100% CO₂, 75/25 Ar/CO₂ or 98/2 Ar/O₂. Even in the most difficult applications 70S-6 produces a smooth stable arc with low spatter, producing a weld bead that ties in evenly with the sides and has a smooth finished appearance.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06- 0.15	0.15 max	0.15 max	1.40- 1.85	0.80- 1.15	0.025 max
S	Cu	Mo	V	Fe	Other
0.035 max	0.50 max	0.15 max	0.03 max	bal.	0.50 max

Typical Mechanical Properties*	
Tensile Strength	87,000 psi
Yield Strength	74,000 psi
Elongation in 2"	28 %

*using 98%Ar/2%O₂

Data contained in this catalog are typical of the products described, but are not suitable for specifications.



ER70S-B2L

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER70S-B2L

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER70S-B2L is identical to 80S-B2 except for the low-carbon content (1/2% maximum). It exhibits greater resistance to cracking and is more suitable for welds to be left in the as-welded condition or when the accuracy of the postweld heat treatment operation is questionable. The classification was previously ER80S-B2L but the strength requirements and classification designator have been changed to reflect the true strength capabilities due to the lower carbon content in the chemical composition.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05 max	1.20- 1.50	0.20 max	0.40- 0.70	0.40- 0.70	0.025 max
S	Cu	Mo	Other	Al	Tl
0.025 max	0.35 max	0.40- 0.65	0.50 max		

Typical Mechanical Properties	
Tensile Strength	75,000 psi
Yield Strength	58,000 psi
Elongation in 2"	19 %

ER80S-B2

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER80S-B2

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-B2 is used to weld 1¼% Cr - 1/2% Mo steels for elevated temperatures and corrosive service. Careful control of preheat, interpass temperatures, and post-weld heat treatment is necessary to prevent cracking. 80S-B2 is classified after post-weld heat treatment. Special care must be taken when using it in the as-welded condition due to higher strength levels. Recommended GMAW shielding gas is CO₂ or an Argon/CO₂ mixture.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07- 0.12	1.20- 1.50	0.20 max	0.40- 0.60	0.40- 0.70	0.25 max
S	Cu	Mo	Other	Al	Tl
0.025 max	0.35 max	0.40- 0.65	0.50 max		

Typical Mechanical Properties	
Tensile Strength	80,000 psi
Yield Strength	68,000 psi
Elongation in 2"	19 %

ER80S-B3L

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER80S-B3L

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-B3L is identical to ER90S-B3 except for the lower carbon content (.05% max) and the lower tensile and yield strengths. It is used to weld 2 ¼ Chrome - 1 Moly steels used for high temperature, high pressure piping and pressure vessels. ER80S-B3L exhibits greater resistance to cracking and is more suitable for welds left in the as-welded condition. Recommended GMAW shielding gas is CO₂, an Argon/CO₂ mixture or a 98%/2% Argon/O₂ mixture.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05 max	2.30- 2.70	0.20 max	0.40- 0.70	0.40- 0.70	0.025 max
S	Cu	Mo	Other		
0.025 max	0.35 max	0.90- 1.20	0.50 max		

Typical Mechanical Properties (PWHT)	
Tensile Strength	80,000 psi
Yield Strength	68,000 psi
Elongation in 2"	17 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

ER80S-B6 (ER502)

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER80S-B6

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-B6 is used for joining 5% Cr and 1/2% Mo steels such as A336 Gr. F5, A155 Gr. 5 Cr, A335 Grs. P5 and P5b, A217 C5 (cast) and A199/A213 Grs. T5 and T5b. These grades are used for elevated temperature creep service and with corrosion resistance against steam, hot hydrogen gas and high sulfur crude oils. Used primarily in the petro-chemical and refinery industries. A preheat and inter-pass temperature of not less than 350°F should be maintained during welding. 80S-B6 is similar to material previously classified as ER502 in AWS A5.9-93.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.10 max	4.50- 6.00	0.60 max	0.40- 0.70	.050 max	0.025 max
S	Cu	Mo	Other		
0.025 max	0.35 max	0.45- 0.65	0.05 max		

Typical Mechanical Properties	
Tensile Strength	80,000 psi
Yield Strength	68,000 psi
Elongation in 2"	17 %

ER80S-B8 (ER505)

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER80S-B8

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-B8 welding wire is used for joining 9% Cr -1% Mo air hardening steels for elevated temperature creep service, and with corrosion resistance from steam, hot hydrogen gas, and high sulfur crude oils. These include steels such as A335 Grade P9, A336 Grade F9, A217 C12 (Cast), and A199, A200, and A213 grade T9, used primarily in the petrochemical and refinery industries. A preheat and interpass temperature of not less than 400°F should be maintained during welding. 80S-B8 is similar to material previously classified as ER505 in AWS A5.9-93.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.09	8.85	0.09	0.49	0.39	0.008
S	Cu	Mo	N		
0.01	0.35	0.90	0.02		

Typical Mechanical Properties	
Tensile Strength	82,000 psi
Yield Strength	70,000 psi
Elongation in 2"	20 %

ER80S-D2

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER80S-D2

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-D2 is a mild steel solid wire that contains 1/2% Mo for increased strength and high levels of manganese and silicon to provide good wetting and good rust and scale tolerance. It will give radiographic quality welds with excellent bead appearance in both ordinary and difficult-to-weld carbon and low alloy steels. 80S-D2 is suitable for single and multiple pass welding of carbon and low alloy steels and higher strength steels in the as welded and postweld heat treated conditions. It exhibits excellent out of position characteristics with the short circuiting and pulsed arc processes.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07- 1.12		0.158 max	1.60- 2.10	0.50- 0.80	0.025 max
S	Cu	Mo	Other	Al	Ti
0.025 max	0.50 max	0.40- 0.60	0.50 max		

Typical Mechanical Properties*	
Tensile Strength	106,000 psi
Yield Strength	90,200 psi
Elongation in 2"	22.5 %

*using 90%Ar/10%CO₂

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

ER80S-Ni1

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER80S-Ni1

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-Ni1 wire deposits weld metal containing a nominal 1% Ni, similar to an E8018-C3 coated electrode. It is used for welding low alloy high-strength steels that require toughness at temperatures as low as -50°F (-46°C).

Typical Chemistry Analysis

C	Cr	Ni	Mn	Si	P
0.12 max	0.15 max	0.80- 1.10	1.25 max	0.40- 0.80	0.025 max
S	Cu	Mo	V	Other	TI
0.025 max	0.35 max	0.35 max	0.05 max	0.5 max	

Typical Mechanical Properties

Tensile Strength	87,000 psi
Yield Strength	73,950 psi
Elongation in 2"	25 %

ER80S-Ni2

Specifications: AWSA5.28, ASME SFA 5.28

Classification: ER80S-Ni2

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER80S-Ni2 is a mild steel solid wire that contains over 2% Ni. It will give radiographic quality welds with excellent bead appearance and is suitable for single and multiple pass welding. 80S-Ni2 is used for welding of fine grain structural steels if low temperature impact values are required. For service temperatures down to -76°F (-60°C).

Typical Chemistry Analysis

C	Cr	Ni	Mn	Si	P
0.12 max		2.00- 2.75	1.25 max	0.40- 0.80	0.025 max
S	Cu	Mo	V	Other	TI
0.025 max	0.35 max			0.5 max	

Typical Mechanical Properties

Tensile Strength	91,300 psi
Yield Strength	78,300 psi
Elongation in 2"	28 %

ER90S-B3

Specifications: AWS A5.28, SFA 5.28

Classification: ER90SB3

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER90S-B3 is used to weld 2¼% Cr - 1% Mo steels used for high temperature, high pressure piping and pressure vessels. It is also used for joining carbon steel and Cr-Mo alloys. Careful control of preheat, interpass temperatures, and postweld heat treatment is essential to prevent cracking. When using 90S-B3 in the as-welded condition special care is required due to the higher strength levels. It can be used in all positions. Recommended shielding gas for GMAW is Argon/1-5% O₂.

Typical Chemistry Analysis

C	Cr	Ni	Mn	Si	P
0.07- 0.12	2.30- 2.70	0.20 max	0.40- 0.70	0.40- 0.70	0.025 max
S	Cu	Mo	Other	Al	TI
0.025 max	0.35 max	0.90- 1.20	0.50 max		

Typical Mechanical Properties

Tensile Strength	80,000 psi
Yield Strength	68,000 psi
Elongation in 2"	17 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

ER100S-1

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER100S-1

Type of power GMAW-DCEP, GTAW-DCEN

Description:

ER100S-1 produces high tensile strength, high impact resistant weld deposits that retain their toughness to -70°F (-57°C), making it suitable for low temperature critical applications. ER100S-1 is meant for the welding of HY80 and HY100 steels.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	0.20	1.60	1.60	0.45	
S	Cu	Mo	V	Al	Ti
		0.40			

Typical Mechanical Properties	
Tensile Strength	104,000 psi
Yield Strength	92,000 psi
Elongation in 2"	16 %

ER110S-1

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER110S-1

Description:

ER110S-1 produces high tensile strength, high impact resistant weld deposits that retain their toughness to -70°F (-57°C) making it suitable for low temperature critical applications. ER110S-1 is meant for the welding of HY100 steels as well as a variety of structural applications where tensile strength requirements exceed 100 ksi (690 MPa).

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	0.30	2.20	1.60	0.40	
S	Cu	Mo	V	Al	Ti
		0.40			

Typical Mechanical Properties	
Tensile Strength	114,000 psi
Yield Strength	98,500 psi
Elongation in 2"	15 %

ER120S-1

Specifications: AWS A5.28, ASME SFA 5.28

Classification: ER120S-1

Description:

ER120S-1 deposits high-strength, very tough weld metal for critical applications. Originally developed for welding HY100 steels for military applications, it is also used for a variety of structural applications where tensile strength requirements exceed 100 ksi (690 MPa), and excellent toughness is required to temperatures as low as -60°F (-51°C). 120S-1 can be welded in all positions. Recommended shielding gas is CO2 or Argon/O2 mix.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07	0.40	2.40	1.70	0.50	0.006
S	Cu	Mo	Other		Ti
0.008		0.50	0.50 max		

Typical Mechanical Properties	
Tensile Strength	120,000 psi
Yield Strength	105,000 psi
Elongation in 2"	15 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

RG-45

Specifications: AWS, SFA A5.2

Classification: RG-45

Description:

RG-45 is a copper coated gas welding rod that is used for welding ordinary low carbon steel up to 1/4" thick. RG-45 produces ductile porosity free welds. It is recommended where ductility and machinability are most important. This rod is excellent for the welding of steel sheets, plates, pipes, castings and structural shapes where the minimum tensile strength requirement does not exceed 45,000 psi.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.08			0.50 max	0.10 max	0.035 max
S	Cu	Mo	V	Al	Ti
0.035				0.02	

Typical Mechanical Properties	
Tensile Strength	45,000 psi
Yield Strength	na psi
Elongation in 2"	22 %

RG-60

Specifications: AWS, SFA A5.2

Classification: RG-60

Description:

RG-60 is used to produce high tensile strength quality welds on low carbon and low alloy steels. The high silicon and manganese composition removes impurities from the molten metal thereby eliminating the need for flux. RG-60 is also used for the oxyfuel gas welding of carbon steels, where the minimum tensile strength requirement does not exceed 60,000 psi.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.15			0.90- 1.40	0.10- 0.35	0.035 max
S	Cu	Mo	V	Al	Ti
0.035 max					

Typical Mechanical Properties	
Tensile Strength	60,000 psi
Yield Strength	na psi
Elongation in 2"	20 %

Please note that not all of the Mild Steel & Low Alloy Wires are listed in this catalog. If you can not find what you are looking for, please contact WeldCor in BC at 1-604-701-6533 or in Alberta at 1-780-468-1777.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E6010

Specifications AWS A5.1, ASME SFA 5.1

Classification E6010

Type of power DCEP

Description:

E6010 is a quick-starting, cellulosic mild steel electrode that provides you with outstanding arc stability, penetration and wash-in. It is ideal for welding in all positions and produces an X-ray quality weld with light slag that's easy to remove. E6010 can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56 and for the root pass on material up to X-80.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06			0.40	0.20	
S	Cu	Mo			

Typical Mechanical Properties	
Tensile Strength	76,000 psi
Yield Strength	61,000 psi
Elongation in 2"	26.0 %

E6010 Plus

Specifications AWS A5.1, ASME SFA 5.1

Classification E6010

Type of power DCEP

Description:

E6010 Plus is a quick-starting, cellulosic mild steel electrode that provides you with outstanding arc stability, penetration and wash-in. It is ideal for welding in all positions and produces an X-ray quality weld with light slag that's easy to remove. E6010 Plus can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56 and for the root pass on material up to X-80. It features enhanced weldability and increased physical properties.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.15			0.45	0.15	
S	Cu	Mo			

Typical Mechanical Properties	
Tensile Strength	72,000 psi
Yield Strength	60,000 psi
Elongation in 2"	25.0 %

E6011

Specifications AWS A5.1, ASME SFA 5.1

Classification E6011

Type of power AC or DCEP

Description:

Stable arc characteristics and good penetration are what you can expect to get from E6011 electrode. Designed for use with AC power sources, E6011 has high operator appeal and produces a fine spray transfer that is ideal for all welding positions. Excellent choice for welding on steels that cannot be completely cleaned or where the steel is rusty or painted.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.14			0.47	0.18	0.009
S	Cu	Mo			
0.009					

Typical Mechanical Properties	
Tensile Strength	77,700 psi
Yield Strength	63,200 psi
Elongation in 2"	25.0 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E6013Specifications AWS A5.1, ASME SFA 5.1Classification E6013Type of power AC, DCEN or DCEP**Description:**

E6013 is an all-purpose electrode that can be used with either AC or DC operation. Originally developed for light gage metal, it offers sufficient penetration for welding on heavier assemblies. Ideal for general purpose fabrication, machine parts, metal buildings and structures, and shaft build-up.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.10			0.28	0.27	0.012
S	Cu	Mo			
0.016					

Typical Mechanical Properties

Tensile Strength	72,600 psi
Yield Strength	61,300 psi
Elongation in 2"	26.5 %

E6022Specifications AWS A5.1Classification E6022Type of power AC, DCEN or DCEP**Description:**

E6022 is designed for welding roof decking to support beams and other similar applications where burn-through spot welds with full penetration are required. E6022 is also designed to weld through galvanized or painted roof decking and can be used on plated and dirty decking as well. It is also excellent for rapid downhill welding when joining light gauge materials.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.18			0.25	0.15	0.015
S	Cu	Mo			
0.017					

Typical Mechanical Properties

Tensile Strength	60,000 psi
Yield Strength	not req'd psi
Elongation in 2"	not req'd %

E7010-A1Specifications AWS A5.5Classification E7010-A1Type of power DCEP**Description:**

E7010-A1 is a high cellulose coated electrode that produces weld deposits containing 0.5% Mo, allowing its use on high tensile, low alloy steels. It can be used in any position. The addition of Mo allows for its use on high tensile, low alloy steels. AC or DC reverse polarity. E7010-A1 electrodes are used on chrome-moly piping or casting where high tensile strength and creep resistance at high temperatures and high pressures are desired. Common applications include shaft build-up and repair, gear teeth, boilers, oil well casting, and forging dies.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.09			0.35		0.01
S	Cu	Mo			
1.015		0.52			

Typical Mechanical Properties

Tensile Strength	88,000 psi
Yield Strength	71,000 psi
Elongation in 2"	30 %
Avg Charpy's @ +40°F	56 ft.lb
Avg Charpy's @ -40°F	21 ft.lb

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E7014

Specifications AWS A5.1, ASME SFA 5.1

Classification E7014

Type of power AC, DCEN or DCEP

Description:

E7014 is a versatile, all-position electrode that you can use with either AC or DC (electrode negative or electrode positive) power. It has a rutile base with an iron powder addition that serves to increase welder-appeal with its outstanding deposition rate and speed of travel. E7014 also produces a weld bead that is excellent in both strength and appearance with slag coverage that is easy to remove.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06			0.54	0.35	0.026
S	Cu	Mo			
0.013					

Typical Mechanical Properties	
Tensile Strength	79,000 psi
Yield Strength	68,100 psi
Elongation in 2"	27.5 %

E7016

Specifications AWS A5.1

Classification E7016

Type of power AC or DCEP

Description:

E7016 is a basic coated electrode for making vertical-down fillet joints with a flat appearance at high speed. The slag is of the self-lifting type. E7016 is especially good on AC and is used in shipbuilding and structural engineering.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.085			0.54	0.50	
S	Cu	Mo			

Typical Mechanical Properties	
Tensile Strength	70,000 psi
Yield Strength	58,000 psi
Elongation in 2"	22.0 %

E7018-1

Specifications AWS A5.1, ASME SFA 5.1

Classification E7018 H4R, 7018-1 H4R

Type of power AC or DCEP

Description:

E7018-1 is a general purpose electrode that allows you to tackle a wide variety of welding projects with ease. You will get superior weldability from this low hydrogen, mild steel electrode that provides you with excellent start and restart capabilities in addition to a smooth and virtually spatter free arc. Extremely high impact levels are available with E7018-1 even at -50°F giving it the AWS E7018-1 designation.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.02	0.01	0.07	1.06	0.50	0.011
S	Cu	Mo	Mn + Ni + Cr + V		
0.014		0.01	1.28		

Typical Mechanical Properties	
Tensile Strength	78,500 psi
Yield Strength	65,500 psi
Elongation in 2"	28.0 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.



E7018 ACSpecifications AWS A5.1, ASME SFA 5.1Classification E7018 H4, E7018Type of power AC or DCEP**Description:**

Highly recommended for applications using small 208/230V, single phase AC welders, E7018AC has good operator appeal, excellent re-striking characteristics and an extremely stable arc. E7018AC is also an excellent choice for skip or tack welds. The slag is self-removing in most applications. E7018AC will work well on all AC power sources and performs exceptionally well on utility-type welders.

Typical Chemistry Analysis

C	Cr	Ni	Mn	Si	P
0.04	0.07	0.08	0.07	0.29	0.08
S	Cu	Mo	V		
0.01		0.01	0.02		

Typical Mechanical Properties

Tensile Strength	81,200 psi
Yield Strength	73,100 psi
Elongation in 2"	29.5 %

E7018-A1Specifications AWS A5.5, ASME SFA 5.5Classification E7018-A1 H4R, E7018-A1Type of power AC or DCEP**Description:**

E7018-A1 is an outstanding welding electrode for welding the 1/2% Mo steel and other low alloy steels. The coating is specially formulated to resist moisture pick-up of high heat and humidity. E7018-A1 offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal.

Typical Chemistry Analysis

C	Cr	Ni	Mn	Si	P
0.04			0.72	0.31	0.014
S	Cu	Mo			
0.011		0.54			

Typical Mechanical Properties

Tensile Strength	89,000 psi
Yield Strength	77,000 psi
Elongation in 2"	27.0 %

E7024Specifications AWS A5.1, ASME SFA 5.1Classification E7024, E7024-1Type of power AC or DCEN**Description:****DESCRIPTION:**

E7024 is an excellent high-speed electrode for fillet welds. It is exceptionally fast when used down hand in properly designed weld joints or in horizontal fillet welds where equal leg fillets are desired. When a drag welding technique is used, the electrode operates well on either AC or DC (electrode negative) power. The slag is self-removing in most applications.

Typical Chemistry Analysis

C	Cr	Ni	Mn	Si	P
0.06			0.81	0.43	0.018
S	Cu	Mo			
0.019					

Typical Mechanical Properties

Tensile Strength	82,000 psi
Yield Strength	72,000 psi
Elongation in 2"	25.0 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E8018-B2

Specifications AWS A5.5, ASME SFA 5.5

Classification E8018-B2 4HR, E8018-B2

Type of power AC or DCEP

Description:

E8018-B2 is an outstanding Cr-Mo welding electrode for higher strength steels with tensile strength greater than 80,000 pounds. The coating resist moisture pick-up under conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal when welding 1/2%, 1% or 1 1/4% Cr & 1/2% Mo bearing materials.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07	1.30		0.71	0.62	0.010
S	Cu	Mo			
0.009		0.55			

Typical Mechanical Properties*

Tensile Strength	102,000 psi
Yield Strength	91,000 psi
Elongation in 2"	21.0 %

*Stress Relieved - 1 Hour at 1275°F

E8018-B2L

Specifications AWS A5.5, ASME SFA 5.5

Classification E8018-B2L H4R/E7018 B2L H4R, E8018-B2L

Type of power AC or DCEP

Description:

E8018-B2L is an outstanding Cr-Mo welding electrode with an extra low carbon analysis. This electrode offers good arc characteristics and easy slag removal. E8018-B2L electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal when welding 1/2%, 1% or 1 1/4% Cr & 1/2% Mo bearing materials.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04	1.36		0.65	0.53	0.011
S	Cu	Mo			
0.012		0.62			

Typical Mechanical Properties*

Tensile Strength	98,000 psi
Yield Strength	84,000 psi
Elongation in 2"	24.0 %

*Stress Relieved - 1 Hour at 1275°F

E8018-B3L

Specifications AWS A5.5, ASME SFA 5.5

Classification E8018-B3L H4R (E9018-B3L H4R)

Type of power AC or DCEP

Description:

E9018-B3L is an outstanding electrode for welding high strength piping, where cracking is a problem. The E9018-B3L provides excellent notch toughness, 20 ft•lbs minimum at 100°F. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.03	2.21		0.61	0.49	0.02
S	Cu	Mo			
0.01		1.03			

Typical Mechanical Properties

Tensile Strength	97,000 psi
Yield Strength	82,000 psi
Elongation % in 2"	23.0 %

*Stress Relieved - 1 Hour at 1275°F

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E8018-B6 (E502-16)Specifications AWS A5.5Classification E8018-B6 H4RType of power DCEP**Description:**

E8018-B6 is an iron powder low hydrogen covered electrode designed for welding of 5% Cr, 1/2% Mo steels and other chromium-molybdenum steels in service conditions too severe for E8018-B3. Its special coating reduces moisture pick-up, minimizing hydrogen cracking and starting porosity. E8018-B6 strikes and re-strikes easily, and provides a stable arc that is easy to control.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	4.40	0.042	0.80	0.29	0.01
S	Cu	Mo			
0.01		0.50			

Typical Mechanical Properties*	
Tensile Strength	96,000 psi
Yield Strength	80,000 psi
Elongation in 2"	24.0 %

*Stress Relieved - 1 Hour at 1375°F

E8018-B8 (E505-16)Specifications AWS A5.5Classification E8018-B8 H4RType of power DCEP**Description:**

Designed for joining creep-resistant, high chromium (9% Cr) alloys of similar composition, E8018-B8 is particularly useful for petrochemical applications. Its iron powder low hydrogen coating reduces moisture pick-up and helps minimize hydrogen cracking and starting porosity. The E8018-B8 is the best choice when service conditions are too severe for E9018-B3 or E8018-B6.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07	9.30	0.12	0.77	0.42	0.02
S	Cu	Mo			
0.01		0.86			

Typical Mechanical Properties*	
Tensile Strength	93,000 psi
Yield Strength	72,000 psi
Elongation in 2"	21.0 %

*Stress Relieved - 1 Hour at 1375°F

E8018-C1Specifications AWS A5.5, ASME SFA 5.5Classification E8018-C1 H4Type of power DCEP**Description:**

E8018-C1 is a high quality electrode designed for applications of 2% Ni deposits. The outstanding characteristics of this electrode provides good puddle control with excellent wetting action and tie in. This electrode offers good arc characteristics and easy slag removal. The E8018-C1 will provide notch toughness of 20 ft•lbs at -75°F. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. This electrode offers resistance to moisture reabsorption, helps retard hydrogen cracking and aids in elimination of starting porosity.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.042		2.43	0.95	0.36	0.010
S	Cu	Mo			
0.011					

Typical Mechanical Properties*	
Tensile Strength	91,000 psi
Yield Strength	80,000 psi
Elongation in 2"	26.0 %

*Stress Relieved - 1 Hour at 1125°F

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E8018-C2Specifications AWS A5.5, ASME SFA 5.5Classification E8018-C2 H4Type of power DCEP**Description:**

E8018-C2 is excellent for low temperature applications requiring tensile strengths greater than 80,000 psi and for welding 2% to 4% Ni steels. Featuring a special formulated coating designed to reduce moisture pick-up and help minimize hydrogen cracking and starting porosity, E8018-C2 is also an outstanding choice in conditions of high heat or humidity.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.03		3.18	1.01	0.40	0.01
S	Cu	Mo			
0.02					

Typical Mechanical Properties*	
Tensile Strength	95,000 psi
Yield Strength	82,000 psi
Elongation in 2"	24.0 %

*Stress Relieved - 1 Hour at 1125°F

E8018-C3Specifications AWS A5.5, ASME SFA 5.5Classification E8018-C3 H4Type of power AC or DCEP**Description:**

E8018-C3 is an outstanding electrode that is designed for 80,000 tensile strength applications and also 1% Ni applications. It provides good puddle control with excellent wetting action, tie in and good arc characteristics. Notch toughness is 20 ft-lbs. at -40° F. The coating is specially formulated to resist conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption, and helps prevent hydrogen cracking.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05	0.07	0.96	1.03	0.26	0.012
S	Cu	Mo	V		
0.009		0.10	0.02		

Typical Mechanical Properties	
Tensile Strength	82,000 psi
Yield Strength	70,000 psi
Elongation in 2"	28.0 %

E9015-B9Specifications AWS A5.5, ASME SFA5.5Classification E9015-B9 H4RType of power DCEP**Description:**

Designed for joining creep-resistant, high chromium (9% Cr-1%Mo-V) alloys of similar composition, the E9015-B9 is particularly useful for power generation and petrochemical applications. The E9015-B9 is the best choice when service conditions are too severe for 9018-B3, 8018-B6, or 8018-B8 with improved creep resistance.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.10	9.60	0.70	0.50	0.25	0.010
S	Cu	Mo	V	Al	N
0.008	0.03	0.90	0.19	0.01	0.04
Nb					
0.07					

Typical Mechanical Properties*	
Tensile Strength	122,000 psi
Yield Strength	104,000 psi
Elongation in 2"	18.2 %

*Stress Relieved - 1 Hour at 1375°F

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E9018-B3

Specifications AWS A5.5, ASME SFA 5.5

Classification E9018-B3 H4R

Type of power AC or DCEP

Description:

E9018-B3 is an outstanding welding electrode for welding higher strength piping, castings and forgings. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.08	2.28		0.72	0.42	0.014
S	Cu	Mo			
0.009		1.19			

Typical Mechanical Properties*	
Tensile Strength	112,000 psi
Yield Strength	95,000 psi
Elongation % in 2"	21.0 %

*Stress Relieved - 1 Hour at 1275°F

E9018-B3L

Specifications AWS A5.5, ASME SFA 5.5

Classification E9018-B3L H4R (E8018-B3L H4R)

Type of power AC or DCEP

Description:

E9018-B3L is an outstanding electrode for welding high strength piping, where cracking is a problem. The E9018-B3L provides excellent notch toughness, 20 ft-lbs minimum at 100°F. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Same as E9018-B3 with the exception that this is a low carbon electrode with lower Tensile and Yield strengths.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.03	2.21		0.61	0.49	0.02
S	Cu	Mo			
0.01		1.03			

Typical Mechanical Properties	
Tensile Strength	97,000 psi
Yield Strength	82,000 psi
Elongation % in 2"	23.0 %

*Stress Relieved - 1 Hour at 1275°F

E9018-M

Specifications AWS A5.5, ASME SFA 5.5

Classification E9018-M H4R

Type of power AC or DCEP

Description:

E9018M is an outstanding welding electrode for welding higher strength steels with tensile strength in excess of 90,000 psi. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.054	0.07	1.64	1.10	0.27	0.012
S	Cu	Mo	V		
0.009		0.35	0.012		

Typical Mechanical Properties	
Tensile Strength	100,000 psi
Yield Strength	89,000 psi
Elongation % in 2"	24.0 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E10018-D2

Specifications AWS A5.5, ASME SFA 5.5

Classification E10018-D2 H4R

Type of power AC or DCEP

Description:

Featuring good arc characteristics, crack resistance and ductility, E10018-D2 is outstanding for welding low alloy, high-strength steels and manganese-molybdenum steels requiring tensile strengths of at least 100,000 psi. Its specially formulated coating, designed to reduce moisture pick-up and minimize hydrogen cracking and starting porosity, makes it great for conditions of high heat and humidity. Preferred by foundries where normalizing treatments are involved.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05			1.85	0.45	0.025
S	Cu	Mo			
0.012		0.35			

Typical Mechanical Properties	
Tensile Strength	112,000 psi
Yield Strength	97,000 psi
Elongation % in 2"	25.0 %

*Stress Relieved - 1 Hour at 1150°F

E 10018-M

Specifications AWS A5.5, ASME SFA 5.5

Classification E10018-M H4R

Type of power DCEP

Description:

E10018-M is designed for welding low alloy, high-strength steels with tensile strengths of at least 100,000 psi. This electrode has high operator appeal due to its good arc characteristics, easy slag removal, and low spatter and smoke. E10018-M is ideal for conditions of high heat and humidity because of its moisture-resistant coating which helps to prevent hydrogen cracking and starting porosity.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	0.10	1.55	1.25	0.40	0.015
S	Cu	Mo			
0.01		0.30			

Typical Mechanical Properties	
Tensile Strength	104,444 psi
Yield Strength	95,000 psi
Elongation % in 2"	24.0 %

E11018-M

Specifications AWS A5.5, ASME SFA 5.5

Classification E11018-M H4R

Type of power AC or DCEP

Description:

The E11018-M is an outstanding electrode designed for use in applications which requires weld joints with 100,000 psi minimum tensile strength. E11018-M provides excellent puddle control with good wetting action and tie in. It also has very good arc characteristics and easy slag removal.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05	0.20	1.85	1.40	0.28	0.014
S	Cu	Mo	V		
0.014		0.33	0.01		

Typical Mechanical Properties	
Tensile Strength	110,000 psi
Yield Strength	101,000 psi
Elongation % in 2"	21.0 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E12018-M

Specifications AWS A5.5, ASME SFA 5.5

Classification E12018-M H4R

Type of power AC or DCEP

Description:

E12018-M is a high quality electrode for high tensile steels where welds of 120,000 psi tensile strengths are required. The coating is specially formulated to resist conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps retard hydrogen cracking and aids in eliminating starting porosity.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	0.66	2.34	1.91	0.32	0.016
S	Cu	Mo	V		
0.011		0.46	0.01		

Typical Mechanical Properties	
Tensile Strength	138,000 psi
Yield Strength	116,000 psi
Elongation % in 2"	20.0 %

Please note that not all of the Mild Steel & Low Alloy Electrodes are listed in this catalog. If you can not find what you are looking for, please contact WeldCor in BC at 1-604-701-6533 or in Alberta at 1-780-468-1777.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E70C-6M

Specifications: AWS A5.18, SFA 5.18

Classification: E70C-6M

Description:

E70C-6M is a carbon steel, composite metal cored electrode for gas shielded arc welding. This electrode is intended for single and multiple-pass welding of carbon and certain low alloy steels, where a minimum tensile strength of 70,000 psi is required in the deposited weld metal. Recommended shielding gases are mixtures of Argon/CO₂, with a minimum of 75% Argon, and Argon/O₂ with a minimum of 95% argon.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06			1.55	0.66	0.010
S	Cu	Mo	V	Al	Tl
0.010					

Typical Mechanical Properties	
Tensile Strength	87,200 psi
Yield Strength	78,900 psi
Elongation	25 %

E70T-1

Specifications: AWS A5.20, ASAME SFA 5.20

Classification: E70T-1C, E70T-9C

Description:

E70T-1 is an electrode with a unique slag system which allows multiple weld beads to be stacked in a horizontal fillet with a minimum of "roll" or convexity. A carbon steel electrode intended for single and multiple pass welding in flat and horizontal fillet positions, E70T-1 is designed for use with carbon dioxide gas shielding. This is an excellent electrode for welding plates such as ASTM A36, A285, A515 and A516.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06			1.56	0.58	0.006
S	Cu	Mo	V	Al	Tl
0.010					

Typical Mechanical Properties	
Tensile Strength	88,600 psi
Yield Strength	73,000 psi
Elongation	24 %

E70T-2

Specifications: AWS A5.20, ASAME SFA 5.20

Classification: E70T-2C

Description:

E70T-2 contains a high level of deoxidizers that allow it to weld over heavier levels of rust and mill scale. This CO₂ gas-shielded, flux cored electrode is intended for the single pass welding of carbon steel in flat positions and horizontal fillets. E70T-2 is designed for single pass welding on general steel plate fabrication weldments with good welder appeal when welding on mill scale, rust, or other mild contaminants. Low spatter levels, with easily detachable slag.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
Not Specified: as PER AWS					
S	Cu	Mo	V	Al	Tl

Typical Mechanical Properties	
Tensile Strength	81,000 psi
Yield Strength	N/R psi
Guided Bend Test	Meets AWS Req.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E70T-4

Specifications: AWS A5.20, SFA 5.20

Classification: E70T-4

Description:

E70T-4 is a carbon steel, flux cored electrode for use without external gas-shielding in multiple pass welding of carbon steels. This electrode is intended for flat position welding of grooves and fillets and horizontal fillet welding with extremely high deposition rates. E70T-4 is ideally suited for welding applications where gas-shielded electrodes may have problems, such as outdoors or in windy conditions

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.20			0.50	0.17	0.008
S	Cu	Mo	V	Al	Ti
0.003				1.59	

Typical Mechanical Properties

Tensile Strength	87,800 psi
Yield Strength	65,000 psi
Elongation	26.5 %

E71T-1/T-9

Specifications: ANSI/AWS A5.20, SFA 5.20

Classification: E71T-1C, E71T-1M, E71T-9C,
E71T-9M

Description:

E71T-1/T-9 is a flux cored, gas-shielded electrode intended for single and multiple pass welding of carbon steels in all positions. This electrode is designed for use with 100% CO₂ and 75-80% Argon / 20-25% CO₂ shielding gas mixtures. E71T-1/T-9 is superb for applications where the following steels may be employed: ASTM A131, A285, A515 Gr 70 and A516 Gr 70.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05			1.39	0.56	0.008
S	Cu	Mo	V	Al	Ti
0.010					

Typical Mechanical Properties*

Tensile Strength	89,100 psi
Yield Strength	78,100 psi
Elongation	26.3 %

*using CO₂ gas

E71T-1/T-12MJ

Specifications: ANSI/AWS A5.20, SFA 5.20

Classification: E71T-1C, E71T-1M, E71T-9C
E71T-9M, E71T-12C, E71T-12MJ

Description:

E71T-1/T-12MJ is designed for single and multiple pass welding of carbon steels in all positions. There are numerous applications for which E71T-1/T-12MJ is well suited, many of them previously reserved for EXX18 covered electrodes. This electrode excels in welding where requirements are stringent, such as offshore platforms and pipe systems, pressure vessels, oil and gas pipelines, petrochemical pipelines, structural steel, bridge fabrication, etc. E71T-1/T-12MJ has excellent CVN toughness with very low fume generation rates and diffusible hydrogen levels. E71T-1/T-12MJ easily exceeds all "recommended requirements."

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06		0.39	1.30	0.42	0.009
S	Cu	Mo	V	Al	Ti
0.090					

Typical Mechanical Properties*

Tensile Strength	81,500 psi
Yield Strength	66,700 psi
Elongation	28.0 %
CVN @ 0°F	110 ft.lbs
CVN @ -50°F	37 ft.lbs

*using CO₂ gas

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E71T-11

Specifications: AWS A5.20, SFA 5.20

Classification: E71T-11

Description:

E71T-11 is a carbon steel, flux cored wire for use without external gas shielding. This flux cored wire is intended for semi-automatic and automatic welding of carbon steel in single pass and limited multiple pass applications. E71T-11 is designed to operate on straight polarity (DCEN) and is well suited for butt, lap, and fillet welds on steels from 16 gauge through 1/2". It's versatility makes it an excellent selection for assembly and maintenance welding in all positions.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.21			0.30	0.15	0.010
S	Cu	Mo	V	Al	Tl
0.010				1.50	

Typical Mechanical Properties	
Tensile Strength	89,400 psi
Yield Strength	66,600 psi
Elongation	23.5 %

E71T-GS

Specifications: AWS A5.20, SFA 5.20

Classification: E71T-GS, E71T-14

Description:

E71T-GS is a carbon steel, flux cored wire for use without an external shielding gas. This flux cored wire is intended for welding thin gauge carbon steel, ranging from 3/16" to 22 gauge. Applications are limited to single-pass weldments. It is also designed to weld quite effectively over galvanized material and can be used on certain aluminized surfaces as well. E71T-GS requires no external shielding gas and should be welded with DCEN (straight polarity).

Typical Chemistry Analysis*					
C	Cr	Ni	Mn	Si	P
S	Cu	Mo	V	Al	Tl

* The composition of the weld metal is not particularly meaningful since electrodes of these classifications are intended only for single pass welds

Typical Mechanical Properties	
Tensile Strength	86,400 psi
Longitudinal Guided Bend Test	Satisfactory

E80T1-B2

Specifications: AWS A5.29, SFA 5.29

Classification: E80ST1-B2C

Description:

E80T1-B2 is a low alloy steel electrode for flux cored arc welding using 100% CO₂ gas. It is designed for single and multiple pass welding in the flat and horizontal positions of certain chromium-molybdenum steel and pipe grades, where 1 1/4% Cr and 1/2% Mo are required in the weld deposit. E80T1-B2 is an excellent selection to weld steels subject to high temperature service such as ASTM A387, Gr. 11 plate and A335 P11 pipe.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	1.20		0.63	0.57	0.010
S	Cu	Mo	V	Al	Tl
0.010		0.50			

Typical Mechanical Properties*	
Tensile Strength	91,000 psi
Yield Strength	81,500 psi
Elongation	20.0 %

*Stress Relieved - 1 Hour at 1275°F

Data contained in this catalog are typical of the products described, but are not suitable for specifications.



E80T1-Ni1

Specifications: AWS A5.29, SFA 5.29

Classification: E80T1-Ni1C

Description:

E80T1-Ni1 is a gas-shielded electrode intended for single and multiple pass horizontal fillet and flat position welding of carbon and low alloy steels requiring a minimum tensile strength of 80,000 psi and good CVN toughness (30 ft·lbs. @ -20° F). It is the ideal selection for welding steels combining moderate tensile strength and excellent CVN toughness, such as ASTM A572 Gr60, A302, A575, and A734.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05		0.98	1.10	0.25	0.010
S	Cu	Mo	V	Al	Ti
0.010					

Typical Mechanical Properties

Tensile Strength	86,400 psi
Yield Strength	73,700 psi
Elongation	27.0 %

E80T5-B2

Specifications: AWS A5.29, SFA 5.29

Classification: E80T5-B2C

Description:

E80T5-B2 is intended for single and multiple pass welding of certain chromium-molybdenum steels, plate and pipe requiring 1 1/4% Cr and 1/2% Mo in the weld deposit such as ASTM A387 Gr 11 plate and A335 Gr P11 pipe. The basic slag limits welding to horizontal fillets and the flat position. As with all basic slag electrodes, welder appeal is limited compared to rutile slag electrodes.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.06	1.25		0.70	0.40	0.010
S	Cu	Mo	V	Al	Ti
0.010		0.52			

Typical Mechanical Properties*

Tensile Strength	94,000 psi
Yield Strength	82,000 psi
Elongation	25 %

*Stress Relieved - 1 Hour at 1275°F

E81T1-A1

Specifications: AWS A5.29, SFA 5.29

Classification: E81T1-A1C

Description:

E81T1-A1 is a low alloy steel electrode for flux cored arc welding using CO₂ shielding gas. This electrode is intended for single and multiple pass welding, in all positions, on steels where the addition of 1/2% Mo is required in the deposited weld metal. E81T1-A1 is ideally suited for welding certain C-Mo steels used in the fabrication of boilers and pressure vessels such as ASTM A161, A204 and A302 Gr. A plate and A335-P1 pipe.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05			0.97	0.35	0.010
S	Cu	Mo	V	Al	Ti
0.010		0.53			

Typical Mechanical Properties*

Tensile Strength	93,300 psi
Yield Strength	84,600 psi
Elongation	23.5 %

*Stress Relieved - 1 Hour at 1150°F

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E81T1-B2

Specifications: AWS A5.29, SFA 5.29

Classification: E81T1-B2C

Description:

E81T1-B2 is a low alloy steel electrode for flux cored arc welding with external gas shielding. This electrode is intended for single and multiple pass welding, in all positions, of certain Cr-Mo steel plate and pipe, where 1¼% Cr and 1/2% Mo are required in the weld deposit. CO₂ is the recommended shielding gas. E81T1-B2 is formulated to weld steels subject to high temperature service such as A387 Gr. 11 plate and A335 P11 pipe.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.07	1.15		0.81	0.28	0.01
S	Cu	Mo	V	Al	Ti
0.01		0.45			

Typical Mechanical Properties*	
Tensile Strength	94,200 psi
Yield Strength	84,200 psi
Elongation	20 %

*Stress Relieved - 1 Hour at 1275°F

E81T1-B2L

Specifications: AWS A5.29, SFA 5.29

Classification: E81T1-B2LC

Description:

E81T1-B2L is a premium low alloy steel electrode intended for single and multiple pass, all position welding of certain 1¼% Cr and 1/2% Mo steel plate and pipe, where lower carbon levels are required in the weld deposit. E81T1-B2L is specially designed to weld thin-walled A335-P11 pipe or tube and is well suited for use in the fabrication of pressure vessels, heat exchangers and boilers.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.03	1.10		0.80		0.010
S	Cu	Mo	V	Al	Ti
0.010	0.30	0.50			

Typical Mechanical Properties*	
Tensile Strength	92,200 psi
Yield Strength	79,400 psi
Elongation	22 %

*Stress Relieved - 1 Hour at 1275°F

E81T1-B6

Specifications: AWS A5.29, ASME SFA 5.29

Classification: E81T1-B6M

Description:

E81T1-B6 is a low alloy steel electrode intended for single and multiple pass, all position welding of certain chromium-molybdenum steels where a weld deposit of 5% Cr and 1/2% Mo is required. E81T1-B6 is specially formulated for welding tube, pipe and plate subjected to high temperature service, such as A213-T5 and A335-P5.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.08	4.85		0.47	0.27	0.006
S	Cu	Mo	V	Al	Ti
0.010		0.56			

Typical Mechanical Properties*	
Tensile Strength	89,000 psi
Yield Strength	79,200 psi
Elongation	19.9 %

*Stress Relieved - 1 Hour at 1375°F

Data contained in this catalog are typical of the products described, but are not suitable for specifications.



E81T1-B8

Specifications: AWS A5.29, ASME SFA 5.29

Classification: E81T1-B8M

Description:

E81T1-B8 is an all position, flux cored electrode formulated for single and multiple pass welding of 9% Cr and 1% Mo such as A335-P9 piping and A213-T9 tubing. Typical applications involve high temperature service in the petrochemical and petroleum industry.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.09	9.30		0.50	0.35	0.010
S	Cu	Mo	V	Al	Ti
0.010		1.05			

Typical Mechanical Properties*

Tensile Strength	96,300 psi
Yield Strength	78,000 psi
Elongation	20 %

*Stress Relieved - 1 Hour at 1375°F

E81T1-Ni1

Specifications: AWS A5.29, SFA 5.29

Classification: E81T1-Ni1C, E81T1-Ni1M

Description:

E81T1-Ni1 is a low alloy steel electrode for flux cored arc welding with external gas shielding. This electrode is intended for single and multiple pass welding, in all positions, on carbon and low alloy steels requiring good charpy v-notch toughness at subzero temperatures. Both 100% CO₂ and 75-80% Argon – balance CO₂ can be utilized with E81T1-Ni1. Typical steels welded with E81T1-Ni1 include ASTM A572, A302, A588 and A734

Typical Chemistry Analysis*					
C	Cr	Ni	Mn	Si	P
0.04		1.00	1.04	0.44	0.010
S	Cu	Mo	V	Al	Ti
0.010					

Typical Mechanical Properties*

Tensile Strength	83,500 psi
Yield Strength	76,900 psi
Elongation	23.5 %

*Using 100% CO₂ gas

E81T1-Ni2

Specifications: AWS A5.29, SFA 5.29

Classification: E81T1-Ni2C, E81T1-Ni2M

Description:

E81T1-Ni2 is an excellent selection for welding steels which require good CVN toughness (50 ft-lbs. @ -40° F) and tensile strength in the range of 80,000-100,000 psi. It is designed for single and multiple pass welding of carbon and certain low alloy steels in all positions using both 100% CO₂ and 75-80% Argon – balance CO₂. E81T1-Ni2 is a fine choice for welding steels such as ASTM A572, A575 and A734.

Typical Chemistry Analysis*					
C	Cr	Ni	Mn	Si	P
0.05		2.40	0.83	0.29	0.010
S	Cu	Mo	V	Al	Ti
0.010					

Typical Mechanical Properties*

Tensile Strength	87,000 psi
Yield Strength	73,000 psi
Elongation	26 %

*Using 100% CO₂ gas

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E81T1-W2

Specifications: AWS A5.29, SFA 5.29

Classification: E81T1-W2C

Description:

E81T1-W2 is a gas-shielded, flux cored, low alloy steel electrode for all position welding of weathering steels. Welder appeal is excellent with a spray transfer, thin slag which removes easily and cleanly, and a smooth bead profile. E81T1-W2 contains alloy additions which match those of the “weathering” steels such as ASTM A588. This provides weld metal which matches the corrosion resistance and coloring of the weathering-type structural steels.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04	0.60	0.70	0.94	0.52	0.010
S	Cu	Mo	V	Al	Ti
0.010	0.59				

Typical Mechanical Properties*	
Tensile Strength	91,000 psi
Yield Strength	81,500 psi
Elongation	24 %

E91T1-B3

Specifications: AWS A5.29, ASME SFA 5.29

Classification: E91T1-B3C, B3M

Description:

E91T1-B3 is specifically formulated for welding materials subjected to high temperature service using both 100% CO₂ and 75% Argon – balance CO₂ gas. It provides single and multiple pass, all position welding of certain Cr-Mo steels such as A387 Gr. 22 plate and A335 P22 pipe and leaves a 2¼% Cr / 1% Mo weld metal deposit.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.08	2.27		0.51	0.59	0.01
S	Cu	Mo	V	Al	Ti
0.01		0.99			

Typical Mechanical Properties*	
Tensile Strength	102,100 psi
Yield Strength	87,400 psi
Elongation	18 %

*using CO₂

E91T1-B9

Specifications: AWS A5.29, ASME SFA 5.29

Classification: E91T1-B9M

Description:

Designed for single and multiple pass welding of 9% Cr and 1% Mo steels, the E91T1-B9 all position, flux cored electrode contains small additions of Nb (also known as Cb), V, and N to improve long term creep properties. E91T1-B9 is used to weld steels such as A387 Gr 91 plate; A335 P91 and A369-FP91 piping; A199-T91, A200-T91 and A213-T91 tubing; A182-F91 forgings; as well as fittings and castings of similar composition.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.1	9	0.35	0.7	0.25	0.01
S	Cu	Mo	V	Al	N
0.01		1	0.2	<0.10	0.04
Nb					
0.04					

Typical Mechanical Properties*	
Tensile Strength	106,900 psi
Yield Strength	86,100 psi
Elongation	19 %

*SR 2HR@1375° F, using 75% Ar/25%CO₂

Data contained in this catalog are typical of the products described, but are not suitable for specifications.



E91T1-K2

Specifications: AWS A5.29, ASME SFA 5.29

Classification: E91T1-K2C

Description:

E91T1-K2 proves an ideal selection for weldments requiring 90,000 psi minimum tensile strength and good CVN toughness values. Use either 100% CO₂ or 75-80% Argon – balance CO₂ shielding gas. This gas-shielded flux cored electrode is intended for single and multiple pass welding of steels such as HY-80, HY-100, ASTM A710, A514 and other similar high strength steels.

Typical Chemistry Analysis*					
C	Cr	Ni	Mn	Si	P
0.05		1.64	1.32	0.51	0.010
S	Cu	Mo	V	Al	Ti
0.010		0.24			

Typical Mechanical Properties*	
Tensile Strength	103,400 psi
Yield Strength	91,700 psi
Elongation	22 %

*using CO₂

E100T1-K3

Specifications: AWS A5.29, SFA 5.29

Classification: E100T1-K3

Description:

E100T1-K3 is a gas shielded, low alloy steel electrode for flux cored arc welding of certain high strength low alloy steels such as A514 and HY-80. This electrode is intended for single and multiple pass welding in horizontal fillets and the flat position. E100T1-K3 should be used only with CO₂ gas shielding.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05		1.80	1.20	0.30	0.012
S	Cu	Mo	V	Al	Ti
0.012		0.35			

Typical Mechanical Properties	
Tensile Strength	105,700 psi
Yield Strength	94,000 psi
Elongation	23 %

E100T5-D2

Specifications: AWS A5.29, SFA 5.29

Classification: E100T5-D2

Description:

With a deposited weld metal of approximately 1 1/2% Mn and 1/2% Mo, E100T5-D2 is a low alloy steel electrode with a basic slag system used to weld certain manganese-molybdenum steels and castings such as ASTM A302 GrB and castings such as ASTM A49, A291 and A735. This electrode is intended for single and multiple pass welding in horizontal fillets and the flat position. The preferred shielding gas for E100T5-D2 is 100% CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05			1.75	0.45	0.010
S	Cu	Mo	V	Al	Ti
0.010		0.48			

Typical Mechanical Properties	
Tensile Strength	100,600 psi
Yield Strength	90,700 psi
Elongation	24 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

E110T5-K3

Specifications: AWS A5029, SFA 5.29

Classification: E110T5-K3C

Description:

E110T5-K3 is a low alloy steel, gas-shielded, flux cored electrode for horizontal fillet and flat position welding of certain HSLA steels. This electrode is capable of single and multiple pass welding. The arc transfer is globular with a convex bead profile due to the nature of a basic slag system. These characteristics make the E110T5-K3 an ideal selection for welding high strength, low alloy steels such as T-1, ASTM A514 and HY-100. Shielding gas is 100% CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04		2.01	1.64	0.46	0.010
S	Cu	Mo	V	Al	Tl
0.010		0.46			

Typical Mechanical Properties*	
Tensile Strength	116,000 psi
Yield Strength	104,000 psi
Elongation	20 %

*using CO₂.

E111T1-K3C, K3M

Specifications: AWS/ANSI A5.29, SFA 5.29

Classification: E111T1-K3C, E111T1-K3M

Description:

E111T1-K3C/M are designed for single and multiple pass welding, in all positions, of specific high strength, low alloy steels where a minimum tensile strength of 110,000 psi is important. Both premium electrodes are ideal choices for matching the tensile strength of certain base metals such as ASTM A514 and HY-100. E111T1-K3C/M can be welded using either 100% CO₂ or 75-80% Argon – balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.05		1.96	1.76	0.35	0.010
S	Cu	Mo	V	Al	Tl
0.010		0.40			

Typical Mechanical Properties	
Tensile Strength	113,600 psi
Yield Strength	109,700 psi
Elongation	18 %

E120T5-K4

Specifications: AWS/ANSI A5.29, SFA 5.29

Classification: E120T5-K4C

Description:

E120T5-K4 is a low alloy steel electrode for flux cored arc welding with external gas-shielding. This electrode is intended for flat and horizontal fillet welding of certain low alloy steels where a minimum tensile strength of 120,000 psi and good low temperature notch toughness are required. E120T5-K4 is also a good selection for welding steels such as HY-100 and ASTM A514 and for welding abrasion resistant steels to HSLA and carbon steels. CO₂ is the recommended shielding gas.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04	0.57	2.27	1.90	0.42	0.010
S	Cu	Mo	V	Al	Tl
0.010		0.60			

Typical Mechanical Properties	
Tensile Strength	132,100 psi
Yield Strength	116,000 psi
Elongation	15 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

4130LN

Specifications: No AWS Specification

Classification:

Description:

4130LN is a basic flux cored electrode designed to weld 4130, and other steels of similar composition, such as 4140 and 8630, following post weld heat treatment. It is not recommended for as-welded applications. The basic slag system assures low weld metal hydrogen in the weld area, which is critical in preventing cracking in sensitive steels such as 4130.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.2	0.64	0.802	1.18	0.7	0.008
S	Cu	Mo	V	Al	Ti
0.013		0.21			

Typical Mechanical Properties	
Tensile Strength	106,900 psi
Yield Strength	98,600 psi
Elongation	20.8 %

Please note that not all of the Mild Steel & Low Alloy Flux cored Wires are listed in this catalog. If you can not find what you are looking for, please contact WeldCor in BC at 1-604-701-6533 or in Alberta at 1-780-468-1777.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

EM12K

Specifications: AWS A5.17

Classification: EM12K

Description:

EM12K is a low carbon, medium manganese, low silicon general purpose wire for submerged arc welding. It is a versatile, single or multi pass product suitable for joining a wide range of non-alloyed steels with a wide variety of fluxes. Use the EM12K wire with precaution when combined with high Manganese alloying fluxes. In certain applications the Mn content in the weld metal could reach critical levels, leading to hot cracking.

Typical Chemistry Analysis					
C	Mn	Si	S	P	Cu
0.09	1.12	0.22	0.015	0.01	0.05

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

EM13K

Specifications: AWS A5.17

Classification: EM13K

Description:

EM12K is a low carbon, medium manganese, medium silicon wire that allows faster welding travel speeds, resistance to porosity, and improved mechanical properties. EM13K can be used in single and multiple-pass welding of non-alloyed and fine-grain steels, general fabrication, structural components, heavy equipment components, railcar frames, wheel fabrication, storage tanks, boilers, pressure vessels, ship panels, pipe double jointing, wind towers.

Typical Chemistry Analysis					
C	Mn	Si	S	P	Cu
0.09	1.1	0.57	0.015	0.01	0.05

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

EB2

Specifications: AWS A5.23 / ASME SFA5.23

Classification: EB2

Description:

EB2 is a copper coated submerged arc wire recommended for welding 1¼Cr - ½Mo creep resistant steels. It is used in the chemical industry and in the ammonia synthesis process, for heat exchangers, boilers, piping and pressure vessels for in the petro-chemical industry, and is suitable for facing on temperature service up to 1100F (550°C). EB2 is also used M casting and for casting repairs. Materials to be welded: A182 F11 & F12, A199 T11, A200 T11, A213 T11 & T12, A217 WC6& WC11, A234 WP11 & WP12, A335 P11 & P12, and A387 Grade 11 &12.

Typical Chemistry Analysis					
C	Cr	Mo	Cu	Mn	Si
0,1	1,1	0,5	0,15	0,8	0,15
S	P				
0,01	0,01				

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

EB3

Specifications: AWS A5.23 / ASME SFA5.23

Classification: EB3

Description:

EB3 is a copper coated submerged arc welding wire used for welding 2%Cr-1%Mo creep resistant steels. It is used in the chemical industry and in the ammonia synthesis process for heat exchangers, boilers, piping and pressure vessels for services temperatures up to 1110F (600C). EB3 is also used in petro-chemical applications and is suitable for facing on castings and casting repairs.

Materials to be welded: A182 F22, A199 T21 & T22, A 200 T21 & T22, A213 T22, A217 WC9, A234 WP22, A335 P22, and A387 Grade 21 & 22.

Typical Chemistry Analysis					
C	Cr	Mo	Cu	Mn	Si
0.12	2.5	1	0.15	0.6	0.15
S	P				
0.01	0.01				

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

EB6

Specifications: AWS A5.23 / ASME SFA5.23

Classification: EB6

Description:

EB6 is a copper coated submerged arc welding wire used for welding 5½%Cr - ½%Mo high temperature creep resistant steels. EB6 is primarily used in the petro-chemical and refinery industries. It provides corrosion resistance against steam, hot hydrogen gas and high sulfur crude oils at service temperatures up to 1110°F(600°C).

Materials to be welded: A182 Grade F5,A199 Grade T5, A213 Grade T5, A217 Grade C5,A234 Grade WP5,A335 Grade P5,A336 Grade F5,and A387 Grade 5.

Typical Chemistry Analysis					
C	Cr	Mo	Cu	Mn	Si
0.07	5.5	0.55	0.15	0.5	0.4
S	P				
0.01	0.01				

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

EB8

Specifications: AWS A5.23 /ASME SFA5.23

Classification: EB8

Description:

EB8 is a copper coated submerged arc welding wire used for welding 9%Cr - 1%Mo creep resistant, corrosion resistant steels.EB8 is primarily used in the power plants, chemical or petro-chemical industry and in the ammonia synthesis process. It is also used for heat exchangers, boilers, piping and pressure vessels for service temperatures up to 1110°F(600°C).

Materials to be welded: A182 F9, A199 T9, A213 T9, A217 C12, A234 WP9, A335 Gr 9, and A387 Gr 9.

Typical Chemistry Analysis					
C	Cr	Mo	Cu	Mn	Si
0.07	9	1	0.15	0.5	0.2
S	P				
0.01	0.01				

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

EB9

Specifications: AWS A5.23/ ASME SFA5.23

Classification: EB9

Description:

EB9 is a non-copper coated submerged arc welding wire used for welding 9%Cr-1%Mo creep resistant, corrosion resistant steels. EB9 is primarily used in the petro-chemical industry and for welding P91 and other 9% Cr steels. Long term creep properties are improved by the addition of Nb, V and N. The wire is designed for elevated service temperatures up to 1200F (650°C). It is used for welding headers, steam piping and turbine casings in fossil fuel power plants.

Materials to be welded: A182 F91, A199 T91, A200 T91, A213 T91, A217 C12A, A234 WP91, A335 P91, A336 F91, A369 FP91, and A387 Gr 91.

Typical Chemistry Analysis

C	Cr	Mo	Cu	Mn	Si
0.1	8.8	0.95	0.04	0.6	0.2
S	P	Ni	V	Nb	N
0.003	0.005	0.6	0.2	0.06	0.045

Mechanical Properties

Typical can not be provided as mechanical property results are based on wire/flux combinations and weld procedures as per AWS.

Flux suitability is dependent on the application.

Please note that not all of the Mild Steel & Low Alloy Sub Arc Wires are listed in this catalog. If you can not find what you are looking for, please contact WeldCor in BC at 1-604-701-6533 or in Alberta at 1-780-468-1777.

Data contained in this catalog are typical of the products described, but are not suitable for specifications.