

BARE 16.8.2

Specifications: AWS 5.9, ASME SFA 5.9

Classification:

Description:

BARE 16.8.2 is a solid wire for TIG welding 300H series stainless steel. The consumable has a controlled composition optimized for performance in structural service at temperatures up to 800°C. It is essentially a dilute hybrid between 308H and 316H. Rather than matching any single parent metal, the 16.8.2 has applications for welding all the 3XXH series of stainless steels with up to 0.04-0.10% Carbon. Applications include catalytic crackers, cyclones, transfer lines, furnace parts, thick wall steam piping, superheater headers, gas and steam turbine components in the petrochemical, chemical process plants and in power generation industries.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.06	15.5	8.5	1.3	1.4	1.4
P	S	N	Cu	FN (WRC)	
0.02	0.01		0.1	1 to 6	

Typical Mechanical Properties	
As Welded TIG	
Tensile Strength	>90,000 psi
0.2% Proof Stress	>60,000 psi
Elongation 4d %	35 %

BARE 307 Mod

Specifications: NA

Classification: NA

Description:

BARE 307MOD is an austenitic stainless steel solid wire equivalent to European grade 1.4370M. This grade is used extensively in automotive exhaust system applications as well as joining dissimilar stainless steels.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.05-1.00	12.50-19.50	8.00-9.00	0.5	6.50-7.50	0.65-1.00
P	S	N	Cu		
0.02	0.015				

Typical Mechanical Properties	
Tensile Strength	95,000 psi
Yield Strength	64,000 psi
Elongation	36 %

BARE 308/308H

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER308, ER308H

Description:

BARE 308/308H is used for TIG, MIG, and submerged arc welding of unstabilized stainless steels such as Types 301, 302, 304, 305, 308. This filler metal is the most popular grade among stainless steels, used for general purpose applications where corrosion conditions are moderate. The C content in the 0.04-0.08 range provides higher strength at elevated temperatures.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.04-0.08	19.50-22.00	9.00-11.00	0.50 max	1.00-2.00	0.30-0.65
P	S	N	Cu		
0.03 max	1.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	88,500 psi
Yield Strength	59,500 psi
Elongation	39 %

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

BARE 308/308L

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER308, ER308L

Description:

BARE 308/308L is used for TIG, MIG, and submerged arc welding of stainless steels such as Types 304L, 321, and 347. This classification is the same as the BARE308/308H except that the carbon content is held to a maximum of 0.03% to reduce the possibility of intergranular carbide precipitation. This increases the resistance to intergranular corrosion without the use of stabilizers such as Cb, or Ta.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03-max	19.50-22.00	9.00-11.00	0.75 max	1.0-2.50	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	85,000 psi
Yield Strength	57,000 psi
Elongation	40 %

BARE 308LSi

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER308LSi

Description:

BARE 308LSi is a stainless steel welding wire for TIG, MIG, and submerged arc welding. This wire is used to weld equipment made with 310, 302, 304, 304L, 305, 308, 308L and 347 stainless grades. This classification is the same as the BARE 308/308L except that the Si% is higher. The welding speed is higher than 308 or 308L due to improved wettability of weld metal.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	19.50-22.00	9.00-11.00	0.75 max	1.00-2.50	0.65-1.00
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	86,500 psi
Yield Strength	59,000 psi
Elongation	39 %

BARE 309/309H

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER309, ER309H

Description:

BARE 309 is used for the welding of similar alloys in wrought or cast form. It is mostly used for welding dissimilar materials such as mild steel to stainless steel, as well as for a barrier layer in stainless overlays. For some applications, welding of straight chromium steels can be accomplished with this consumable.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.12-max	23.0-25.0	12.0-14.0	0.75-max	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	88,500 psi
Yield Strength	59,500 psi
Elongation	34 %

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

BARE 309/309L

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER309, ER309L

Description:

BARE 309L is of similar composition as the BARE 309 except for the carbon content being lower than 0.03%. The lower carbon content reduces the possibility of intergranular corrosion. BARE 309L is preferred over 309 for cladding of carbon or low alloy steels, as well as for dissimilar joints that undergo heat treatment.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	23.0-25.0	12.0-14.0	0.75 max	1.0 - 2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	85,000 psi
Yield Strength	58,000 psi
Elongation	36 %

BARE 309L Mod

Specifications:

Classification: ISO 14343: 2009 23 12 2L

Description:

BARE 309LMo is molybdenum-alloyed low carbon stainless steel wire. The low-carbon content in stainless steels reduce the possibility of chromium carbide precipitation and thereby increase the weld metal resistance to intergranular corrosion. BARE 309LMo is use for welding dissimilar welding of stainless and low alloy steels as well as overlay of cladding. Note: Does not meet AWS classification.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	21.0-25.0	12.0-15.0	2.0 - 3.0	1.0 - 2.5	0.30-0.65
P	S	N	Cu	FN (WRC)	
0.03 max	0.03 max		0.3	10	

*AWS A5.9 Cr 23.0-25.0 & Ni 12.0-14.0

Typical Mechanical Properties	
Tensile Strength	85,000 psi
Yield Strength	45,000 psi
Elongation	40 %
Charpy Impacts &-40F	44 ft.lbs

BARE 309LSi

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER309LSi

Description:

BARE 309LSi is of the same chemical composition as the BARE 309L, with higher silicon content to improve the bead appearance and increase welding ease. The weld beads are exceptionally smooth due to good wetting action. BARE 309LSi is mostly used for welding dissimilar materials such as mild steel to stainless steel, as well as for a barrier layer in stainless overlays.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03-max	23.0-25.0	12.0-14.0	0.75 max	1.0-2.5	0.65-1.00
P	S	N	Cu		
0.030 max	0.030 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	89,500 psi
Yield Strength	60,500 psi
Elongation	35 %

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

BARE 310

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER310

Description:

BARE 310 is used for the welding of stainless steels of similar composition in wrought or cast form. The weld deposit is fully austenitic and calls for low heat during welding. BARE 310 can also be used for dissimilar welding.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.08-0.15	25.0-28.0	20.0-22.5	0.75 max	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	89,500 psi
Yield Strength	60,500 psi
Elongation	34 %

BARE 312

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER312

Description:

BARE 312 is used to weld cast alloys of similar composition. It is also used to weld dissimilar metals such as carbon steel to stainless steel, particularly those grades high in Ni and for weld overlays. BARE 312 stainless steel also gives a very high ferrite. When welding similar cast alloys, limit welding to two or three layers only.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.15 max	28.0-32.0	8.0-10.5	0.75 max	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	86,500 psi
Yield Strength	59,000 psi
Elongation	39 %

BARE 316/316H

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER316, ER316H

Description:

BARE 316/316H is used to weld wrought and cast forms of similar composition. The presence of molybdenum increases its creep resistance at elevated temperatures. Carbon content of between 0.04-0.08 provides higher strength at elevated temperatures. When a lower ferrite level of this nominal composition is achieved, it reduces the rate of corrosion in certain media and is suitable for use at cryogenic temperatures.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.04-0.08	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	88,500 psi
Yield Strength	5,900 psi
Elongation	35 %

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

BARE 316/316L

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER316, ER316L

Description:

BARE 316/316L has the same analysis as ER316, except that the carbon content is limited to a maximum of 0.03% in order to reduce the possibility of formation of intergranular carbide precipitation. This filler metal is primarily used for welding low carbon molybdenum-bearing austenitic alloys. BARE 316/316L is not as strong at elevated temperatures as ER316H

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	86,000 psi
Yield Strength	58,000 psi
Elongation	36 %

BARE 316L Si

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER316LSi

Description:

BARE 316LSi is similar to BARE 316L, with higher silicon content for optimum ease in welding and smooth bead appearance. Higher productivity could be realized in MIG welding.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5	0.65-1.00
P	S	N	Cu	F	
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	86,500 psi
Yield Strength	58,500 psi
Elongation	36 %

BARE 317L

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER 317L

Description:

BARE 317L is used for welding stainless steels with similar composition. Due to its higher molybdenum content this alloy offers high resistance to pitting and crevice corrosion. Low carbon makes the weld metal less susceptible to intergranular corrosion.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	18.5-20.5	13.0-15.0	3.0-4.0	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	84,500 psi
Yield Strength	5,800 psi
Elongation	35 %

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

BARE 320LR

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER320LR

Description:

BARE 320LR has a composition similar to BARE 320, except that carbon, silicon, sulfur, and phosphorus levels are kept at lower levels as well as the columbium and manganese being specified at a narrower range. The low melting residuals are limited in this alloy to reduce the possibility of micro-fissuring. It is for this reason that this alloy is often used for welding Type 320 stainless steels.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.025 max	19.0-21.0	32.0-36.5	2.0-3.0	1.5-2.0	0.15-max
P	S	N	Cu	Nb+Ta	
0.015 max	0.02 max		3.0-4.0	8xC min/ 0.40max	

Typical Mechanical Properties

Tensile Strength	86,000 psi
Yield Strength	57,500 psi
Elongation	35 %

BARE 321

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER321

Description:

BARE 321 is a 19.5% Chromium 9.5% Nickel with added Titanium that is used to weld Cr-Ni stainless steels of similar chemical composition. The titanium content reduces intergranular chromium carbide precipitation thereby increasing resistance to intergranular corrosion. BARE 321 is not suitable for use with submerged arc process because only a small portion of the titanium will be recovered in the weld metal.

Typical Chemistry Analysis

C	Cr	Ni	Mo	Mn	Si
0.08 max	18.5-20.5	9.0-10.5	0.75 max	1.0-2.5	0.60-0.65
P	S	Cu	Ti		
0.03 max	0.03 max	0.75 max	9xCmin / 1.0 max		

Typical Mechanical Properties

Tensile Strength	NA	psi
Yield Strength	NA	psi
Elongation	NA	%

BARE 330

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER330

Description:

BARE 330 is used to weld cast and wrought material of similar chemical composition. The weld metal provides excellent heat and scale resistance up to 1800°F. However, high sulfur environments may adversely affect elevated temperature performance.

Typical Chemistry Analysis

C	Cr	Ni	Mo	Mn	Si
0.18-0.05	18.0-17.0	34.0-37.0	0.75 max	1.0-2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties

Tensile Strength	84,000 psi
Yield Strength	56,500 psi
Elongation	29 %

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

BARE 347

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER347

Description:

BARE 347 is a columbium stabilized stainless steel welding wire used to weld Types 321 and 347. The addition of columbium (also known as Nb) reduces the possibility of chromium carbide precipitation and consequent intergranular corrosion.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.08 max	19.0- 21.5	9.0- 11.0	0.75 max	1.0 - 2.5	0.30- 0.65
P	S	N	Cu	Nb+Ta	
0.03 max	0.03 max		0.75 max	10xC min/ 1.0max	

Typical Mechanical Properties	
Tensile Strength	86,500 psi
Yield Strength	57,000 psi
Elongation	35 %

BARE 385(904L)

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER885

Description:

BARE 385 is used for welding materials of similar chemical composition which are used for fabrication of equipment and vessels for handling of sulfuric acid and many chloride containing media. BARE 385 may also find applications for joining Type 317L material where improved corrosion resistance in specific media is needed. In order to reduce the propensity for fissuring and hot cracking, the low melting constituents such as carbon, silicon, and phosphorus in BARE 385 are controlled to lower levels in this alloy

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.025 max	19.0- 21.5	24.0- 26.0	4.2 - 5.2	1.0 - 2.0	0.50 max
P	S	N	Cu		
0.03 max	0.03 max		1.2- 2.0		

Typical Mechanical Properties	
Tensile Strength	86,500 psi
Yield Strength	59,500 psi
Elongation	36 %

BARE 409Nb

Specifications: AWS 5.9, ASME

Classification: ER 409Nb

Description:

BARE 409Nb is a ferritic stainless steel welding wire, which is used to weld Type 409 and 409Ti base materials. The addition of niobium (also known as columbium) leads to preferential reaction with carbon, saving chromium from forming carbides. This improves corrosion resistance, increases strength at high temperatures, and promotes ferritic micro-structure.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.08- max	10.5- 13.5	0.6- 15.0	0.50- max	0.8 max	1.0 max
P	S	N	Cu	Nb+Ta	
0.03 max	0.03 max		0.75 max	10xC min/ 0.75max	

Typical Mechanical Properties	
Tensile Strength	67,500 psi
Yield Strength	50,500 psi
Elongation	26 %

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

BARE 410

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER410

Description:

BARE 410 is used to weld Types 403, 405, 410 and 416. It is also used for welding overlay on carbon steels to resist corrosion, erosion, or abrasion. This material, being an air hardening type, calls for preheating of the joint to 350F before welding.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.12 max	11.5-13.5	0.6-max	0.75-max	0.6-max	0.5-max
P	S	N	Cu		
0.015 max	0.02 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	89,000 psi
Yield Strength	78,500 psi
Elongation	24 %

PWHT between 1350°F and 1400°F for 1Hr

BARE 410NiMo (mod)

Specifications: AWS 5.9, ASME SFA 5.9

Classification: EN ISO 14343 UNS S41086

Description:

BARE 410NiMo (mod) is used primarily to weld cast and wrought material of similar chemical composition. Preheating and interpass temperature of not less than 300°F are required. Post-weld heat treatment should not exceed 1150°F, as higher temperatures may result in hardening. The extra low carbon provides increased crack resistance and ductility compared to the ER410.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.06 max	11.0-12.5	4.0-5.0	0.4-0.7	>0.6	0.5 max
P	S	Cu			
0.03 max	0.03 max	0.75 max			

*AWS A5.9 Mn .60max

Typical Mechanical Properties	
Tensile Strength	118,500 psi
Yield Strength	92,000 psi
Elongation	20 %

PWHT between 1100°F and 1150°F for 1Hr

BARE 420

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER420 UNS S42080

Description:

BARE 420 is used for surfacing applications that require the corrosion resistance provided by 12% Chromium and hardness higher than ER410 deposits. The BARE 420 requires a preheat and interpass temperature of not less than 400°F, followed by slow cooling.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.25-0.40	12.0-14.0	0.60-max	0.75-max	0.60 max	0.50 max
P	S	N	Cu	FN(WRC)	
0.03 max	0.03 max		0.75 max	0	

Typical Mechanical Properties	
Tensile Strength	145,000 psi
Yield Strength	120,000 psi
Elongation	45 %

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

BARE 430

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER430

Description:

BARE 430 is a ferritic stainless steel which offers good ductility in heat-treated condition. In addition to the applications of welding similar alloys, it is also used for overlays and thermal spraying. Preheating of the joint to a minimum of 300°F is recommended before welding.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.1 max	15.5-17.0	0.6 max	0.75 max	0.6 max	0.5 max
P	S	N	Cu		
0.03 max	0.03 max		0.75 max		

Typical Mechanical Properties	
Tensile Strength	77,500 psi
Yield Strength	59,000 psi
Elongation	25 %

PWHT between 1400°F and 1450°F for 2Hr

BARE 630 (17/4PH)

Specifications: AWS 5.9, ASME SFA 5.9

Classification: ER630

Description:

BARE 630 (17-4PH) is a precipitation hardening stainless steel used for welding of materials of similar chemical composition. Mechanical properties of BARE 630 are greatly influenced by the heat treatment.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.05 max	16.0-16.75	4.5-5.0	0.75 max	0.25-0.75	0.75 max
P	S	N	Cu	Nb+Ta	
0.03 max	0.03 max		3.25-4.00	0.15-0.30	

Typical Mechanical Properties	
Tensile Strength	150,000 psi
Yield Strength	135,000 psi
Elongation	10 %

PWHT between 1875°F and 1925°F for 1Hr followed by PH between 1135°F and 1165°F for 4Hrs

BARE 2209

Specifications: AWS 5.9, ASME

Classification: ER 2209

Description:

BARE 2209 is a filler metal designed to weld 22% Cr duplex SS such as UNS N31803. The weld metal possesses a high tensile and yield strength along with moderate ductility. BARE 2209 has very good resistance to stress corrosion cracking and pitting corrosion with a typical pitting resistance equivalent number (PREN) of 32-36. The wire chemical composition results in a lower ferrite content than the base metal for improved weldability.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	21.5-23.5	7.5-9.5	2.5-3.5	0.50-2.00	0.9 max
P	S	N	Cu		
0.03 max	0.03 max	0.08-0.20	0.75 max		

Typical Mechanical Properties	
Tensile Strength	105,500 psi
Yield Strength	85,500 psi
Elongation	26 %

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

BARE 2594

Specifications: AWS / ASME SFA 5.9-2006

Classification: ER2594

Description:

Superduplex grade BARE 2594 provides matching chemistry and mechanical property characteristics to wrought superduplex alloys such as 2507 and Zeron 100x as well as superduplex casting alloys (ASTN A890). The welding wire is overalloyed 2-3% in Nickel to provide the optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile/yield strength and superior resistance to SCC and pitting corrosion.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	24.0-27	8.0-10.5	2.5-4.5	2.5 max	1.0 max
P	S	N	Cu	W	
0.03 max	0.02 max	0.20-0.30	1.5 max	1.0 max	

Typical Mechanical Properties	
Tensile Strength	123,000 psi
Yield Strength	94,000 psi
Elongation	28 %

Please note that not all of the Stainless Steel Bare 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.

COATED 308/308H-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E308-16 & E308H-16

Description:

Excellent for use on Type 301, 302, 304, 305 and 308 base metals, the COATED 308/308H is specially formulated with more than .04 carbon to provide maximum elevated temperature strength. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. It is also ideal for use as an intermediate layer prior to the deposit of hard-facing materials. It yields a concave weld bead that is smooth and refined.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04-max	18.0-21.0	9.0-11.0	0.5-2.5	1.00 max	0.04 max	
S	Cu	Mo				
0.03 max	0.75 max	0.75 max				

Typical Mechanical Properties	
Tensile Strength	86,000 psi
Yield Strength	65,000 psi
Elongation in 2"	41.0 %

COATED 308-15

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E308-15

Description:

With superior crack resistance of high temperatures, COATED 308-15 provides an excellent intermediate layer prior to deposition of hard-facing material. Specially formulated with more than .04 carbon to give you maximum elevated-temperature strength, it is ideal for use on Types 301, 302, 304, 305 and 308 base metals. It has a convex bead and is an excellent choice when welding highly restrained joints or for crack sensitive materials.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04-0.08	18.0-21.0	9.0-11.0	0.5-2.5	1.00 max	0.04 max	
S	Cu	Mo				
0.03 max	0.75 max	0.75 max				

Typical Mechanical Properties	
Tensile Strength	86,000 psi
Yield Strength	65,000 psi
Elongation in 2"	45.0 %

COATED 308L-15

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E308L-15

Description:

Featuring a fully alloyed core wire that contains extra low carbon to prevent carbide precipitation, COATED 308L-15 is excellent for use with type 308 base metals with low or medium carbon content, as well as 18 Cr-8 Ni steels. It has convex bead and is an excellent choice when welding highly restrained joints or for crack sensitive materials. ideal for pipe welding and cryogenic applications.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04-max	18.0-21.0	9.0-11.0	0.5-2.5	1.00 max	0.04 max	
S	Cu	Mo				
0.03 max	0.75 max	0.75 max				

Typical Mechanical Properties	
Tensile Strength	83,000 psi
Yield Strength	64,000 psi
Elongation in 2"	37.0 %

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

COATED 308/308H-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E308-16 & E308L-16

Description:

Primarily designed for welding type 308L base metal with low or medium carbon content, the COATED 308/308L-16 all-position electrode contains low carbon to avert carbide precipitation during welding as well as weld service. Excellent for welding 18Cr-8Ni steels. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	18.0-21.0	9.0-11.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties

Tensile Strength	83,000 psi
Yield Strength	64,000 psi
Elongation in 2"	42.0 %

COATED 308L-17

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E308L-17

Description:

The COATED 308L-17 is designed for the welding of type 308L base metals with low or medium carbon content. The electrode itself has low carbon content to prevent carbide precipitation during welding as well as to inhibit any subsequent carbide precipitation of the weld during service. It yields a concave weld bead that is smooth and refined.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	18.0-21.0	9.0-11.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties

Tensile Strength	83,000 psi
Yield Strength	64,000 psi
Elongation in 2"	37.0 %

COATED 308/309-15

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E309-15

Description:

The COATED 309-15 electrode is outstanding for use with 309-type base metals, as well as for 18-8Cr/Ni clad steels or dissimilar materials if alloy content is sufficiently high for a solid, yet ductile deposit. It has a convex bead and is an excellent choice when welding highly restrained joints or for crack sensitive materials. Ideal for pipe welding and cryogenic applications.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.15 max	22.0-25.0	12.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties

Tensile Strength	88,000 psi
Yield Strength	67,000 psi
Elongation in 2"	37.0 %

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

COATED 309L-15

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E309L-15

Description:

The COATED 309L-15 electrode is excellent when used for weld overlay or for welding stainless steel to mild or low alloy steels. Its low carbon content makes it an outstanding choice when reduced susceptibility to sensitization during high temperature service is an imperative. It has a convex bead and is an excellent choice when welding highly restrained joints or for crack sensitive materials.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	22.0-25.0	12.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties	
Tensile Strength	79,000 psi
Yield Strength	64,000 psi
Elongation in 2"	41.0 %

COATED 309-16/309H-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E309-16

Description:

The COATED 309/309H-16 all-position electrode is primarily designed for welding Type 309 metal but can also be used for 18-8 clad steels or dissimilar materials if the alloy content is sufficiently high for a sound, ductile deposit. It yields a uniform weld bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	22.0-25.0	12.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties	
Tensile Strength	88,000 psi
Yield Strength	67,000 psi
Elongation in 2"	37.0 %

COATED 309/309L-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E309-16 & E309L-16

Description:

The COATED 309/309L-16 all-position electrode is a lower carbon version of the 309H-16 electrode. Low carbon content makes it excellent for applications where reduced susceptibility to sensitization during high temperature service is necessary. Outstanding for dissimilar metal welding such as weld overlay or for welding type 309 stainless steel to mild or low alloy steels. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	22.0-25.0	12.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties	
Tensile Strength	79,000 psi
Yield Strength	64,000 psi
Elongation in 2"	38.0 %

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

COATED 309L-17

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E309L-17

Description:

The COATED 309L-17 electrode is used for weld overlay or for welding Type 309 stainless steel to mild or low alloy steels. It has a low carbon content which helps to reduce the weld's susceptibility to sensitization during high temperature service. It yields a concave weld bead that is smooth and refined.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04- max	22.0- 25.0	12.0- 14.0	0.5- 2.5	1.00 max	0.04 max	
S	Cu	Mo				
0.03 max	0.75 max	0.75 max				

Typical Mechanical Properties

Tensile Strength	79,000 psi
Yield Strength	64,000 psi
Elongation in 2"	41.0 %

COATED 309MoL-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E309LMo-16

Description:

The COATED 309MoL-16 is an all-position electrode designed for applications requiring molybdenum with a standard 309L analysis. This electrode is used primarily for welding type 316L and 316 clad steels, or welding Mo containing austenitic stainless steel to carbon steel, provided the service temperature is less than 600°F. E309MoL-16 is also known as E309LMo-16.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04- max	22.0- 25.0	12.0- 14.0	0.5- 2.5	1.00 max	0.04 max	
S	Cu	Mo				
0.03 max	0.75 max	2.0- 3.0				

Typical Mechanical Properties

Tensile Strength	90,000 psi
Elongation in 2"	35.0 %

COATED 310-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E310-16

Description:

The COATED 310-16 all-position electrode is ideal for welding base metal of similar composition, when the stainless base metal is of unknown composition, as well as for dissimilar metals. Also excellent for welding and building up parts for heat treatment and case hardening furnaces, cement kilns and other burners subject to high temperature oxidation in a non-sulphurous atmosphere. It has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.08 0.20	25.0- 28.0	20.0- 22.5	1.0- 2.5	0.75 max	0.03 max	
S	Cu	Mo				
0.03 max	0.75 max	0.75 max				

Typical Mechanical Properties

Tensile Strength	86,000 psi
Yield Strength	63,000 psi
Elongation in 2"	40.0 %

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

COATED 310Cb-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E310Cb-16 (E309Nb-16)

Description:

The COATED 310Cb-16 all-position electrodes are similar to COATED 310 but contain columbium (also known as Niobium) for improved resistance against carbide precipitation at higher temperatures. It is used for welding AISI 304, 309, 310, 316, 321, and 347 stainless clad steels as well as for joining 35% Cr - 20% Ni - Cb (Nb) stainless steels to mild or carbon steels.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.12 max	25.0- 28.0	20.0 22.0	1.0- 2.5	0.75 max	0.03 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties	
Tensile Strength	90,000 psi
Yield Strength	60,500 psi
Elongation in 2"	31.0 %

COATED 312-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E312-16

Description:

The COATED 312-16 all-position electrode is ideal for new fabrication or repair maintenance applications, and is designed for welding dissimilar joints of Type 312 metals. It can be used on hardenable steels, steel armor and generally hard to weld steels, offering outstanding performance with a directional arc and self-detaching slag. It has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.15 max	28.0- 32.0	8.0 10.5	0.5- 2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties	
Tensile Strength	115,000 psi
Yield Strength	95,000 psi
Elongation in 2"	25.0 %

COATED E316/316H-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E316-16 & 316H-16

Description:

The COATED 316/316H-16 is a fully alloyed core wire all-position electrode featuring a rutile basic coating. It is excellent for welding Type 316 steel in applications requiring increased corrosion resistance of molybdenum-bearing steels. A carbon content of at least .04 provides increased high temperature strength. COATED 316/316H.16 has a smooth running arc that results in a uniform weld bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04- 0.08	17.0- 20.0	11.0 14.0	0.5- 2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	2.0- 3.0			

Typical Mechanical Properties	
Tensile Strength	85,000 psi
Yield Strength	68,000 psi
Elongation in 2"	42.0 %

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

COATED 316L-15

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E316L-15

Description:

The COATED 316L-15 electrode is designed for joining Type 316 steels with low or medium carbon content. Its fully alloyed core wire also contains very low carbon content to limit susceptibility to sensitization during high temperature service. Ideally suited for urea environments. It has a convex bead and is an excellent choice when welding highly restrained joints or for crack sensitive materials.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	17.0-20.0	11.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	2.0-3.0			

Typical Mechanical Properties	
Tensile Strength	82,000 psi
Yield Strength	61,000 psi
Elongation in 2"	42.0 %

COATED 316/316L-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E316-16 & E316L-16

Description:

The COATED 316/316L-16 all-position electrode possesses properties similar to 316/316H-16 except with a much lower carbon content which reduces susceptibility to sensitization during welding. The welds show high resistance to corrosion and fissuring. This makes it an outstanding choice for critical applications. Excellent for welding stainless steel types 316, 316-L and 318. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04-max	17.0-25.0	11.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	2.0-3.0			

Typical Mechanical Properties	
Tensile Strength	82,000 psi
Yield Strength	61,000 psi
Elongation in 2"	42.0 %

COATED 316L-17

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E316L-17

Description:

COATED 316L-17 is a fully alloyed core wire that can be used for welding stainless steel types 316, 316-L and 318. It is similar to 316/316H-16 but with a lower carbon content, making it ideal for urea environments with its reduced susceptibility to sensitization during high temperature service. It yields a concave weld bead that is smooth and refined.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	17.0-20.0	11.0-14	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	2.0-3.0			

Typical Mechanical Properties	
Tensile Strength	82,000 psi
Yield Strength	61,000 psi
Elongation in 2"	42.0 %

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

COATED 317L-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E317L-16

Description:

The increased molybdenum content of the COATED 317L-16 all-position electrode results in higher tensile strength and improved corrosion resistance, as well as greater high temperature creep strength than 316L-type electrodes. It is also highly resistant to moisture pick-up. It has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	18.0-21.0	12.0-14.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	3.0-4.0			

Typical Mechanical Properties	
Tensile Strength	92,000 psi
Yield Strength	69,000 psi
Elongation in 2"	35.0 %

COATED 320LR-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E320LR-16

Type of power

Description:

COATED 320LR is similar in composition to 320, with carbon, silicon, phosphorus, and sulfur controlled to lower limits and columbium and manganese kept to a narrower range. This composition is designed to reduce the possibility of microfissuring; however, low heat input is advisable for welding.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.03 max	19.0-21.0	32.0-36.0	1.5-2.5	0.30 max	0.020 max
S	Cu	Mo	Nb(Cb)+Ta		
0.015 max	3.0-4.0	2.0-3.0	8xC, min to 0.40 max		

Typical Mechanical Properties	
Tensile Strength	85,000 psi
Yield Strength	57,000 psi
Elongation in 2"	34.0 %

COATED 330-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E330-16

Description:

COATED 330-16 is primarily used for heat and creep resisting applications with Type 330 base metal. Its high nickel content gives a strong adherent surface oxide that resists scaling at elevated temperatures above 1800°F. COATED 330-16 has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.18-0.25	14.0-17.0	33.0-37.0	1.0-2.5	1.00 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties	
Tensile Strength	84,500 psi
Yield Strength	57,000 psi
Elongation in 2"	26.5 %

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

COATED 347-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E347-16

Description:

Excellent for welding 347 and 321 steels, COATED 347-16 provides good corrosion resistance in steam or utility applications up to 1400°F and better corrosion resistance than Type 308 electrodes. The addition of Nb makes COATED 347-16 resistant to intergranular corrosion by reducing the possibility of intergranular carbide precipitation. It has a smooth running arc that results in a uniform bead that is flat to slightly convex and offers an outstanding weld from all positions.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.08 max	18.0-21.0	9.0-11.0	0.5-2.5	1.00 max	0.04 max
S	Cu	Mo	Nb(Cb) + Ta		
0.03 max	0.75 max	0.75 max	8xC.min to 1.00 max		

Typical Mechanical Properties

Tensile Strength	95,000 psi
Yield Strength	63,000 psi
Elongation in 2"	36.0 %

COATED 385-16 (904L)

Specifications: AWS 5.4

Classification: E385-16

Description:

COATED 385-16 is used for welding of materials of similar chemical composition (UNS Number N08904, 904L). These materials are used in fabrication of equipment and vessels for handling and storage of sulfuric acid and phosphoric acid. The weld metal is fully austenitic and, as such, the low melting constituents such as carbon, silicon, and phosphorus should be kept low. Welding must be done with low heat input, using stringer bead technique.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.015	20.5-	25.2	2	1.00 max	0.018
S	Cu	Mo	Fe		
0.009	1.75	4.6	Bal.		

Typical Mechanical Properties

Tensile Strength	88,000 psi
Yield Strength	65,500 psi
Elongation in 2"	32.0 %

COATED 410-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E410-16

Description:

COATED 410-16 is an air-hardening stainless steel stick electrode used extensively in welding 12Cr material as well as to overlay carbon steels to impart corrosion, erosion, and abrasion resistance. Being an air-hardening type material, it calls for a preheat and interpass temperature of not less than 400 °F during welding and requires post-weld heat treatment to obtain the required ductility. It has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.12 max	11.0-13.5	0.7- max	1.0- max	0.90 max	0.04 max
S	Cu	Mo			
0.03 max	0.75 max	0.75 max			

Typical Mechanical Properties

Tensile Strength	92,500 psi
Yield Strength	78,000 psi
Elongation in 2"	21.0 %

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

COATED 410NiMo-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E410NiMo-16

Description:

Providing better as-welded toughness than COATED 410-16, the COATED 410NiMo-16 is widely used for welding ASTM CA6NM castings, as well as 410, 410S and 405 base metals. Preheat and interpass of not less than 300°F during welding are recommended. Post-weld heat treatment should be between 1100°F and not exceed 1150°F. as high temperatures may result in hardening. It has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.06 max	11.0-12.5	4.0-5.0	1.0- max	0.90 max	0.04 max	
S	Cu	Mo				
0.03 max	0.75 max	0.40-0.70				

Typical Mechanical Properties	
Tensile Strength	134,000 psi
Yield Strength	123,000 psi
Elongation in 2"	18.0 %

COATED 630-16 (17-4 PH)

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E630-16

Description:

COATED 630-16 is a precipitation hardening stainless steel covered electrode used for welding of materials of similar chemical composition (17Cr/4Ni). Mechanical properties of this alloy are greatly influenced by the heat treatment, thus mechanical properties listed reflect utilization of a postweld heat treatment between 1875°F and 1925°F for one hour, followed by precipitation hardening between 1135°F and 1165°F for four hours.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.03	16.58	4.78	0.56	1.00 max	0.018	
S	Cu	Mo	Fe	Cb		
0.02	3.55	0.2	Bal.	0.24		

Typical Mechanical Properties	
Tensile Strength	150,000 psi
Yield Strength	133,000 psi
Elongation in 2"	10.0 %

COATED Duplex 2209-16

Specifications: AWS A5.4, ASME SFA 5.4

Classification: E2209-16

Description:

Combining high strength with improved pitting and SCC resistance, COATED Duplex 220916 is specially formulated for welding 22 Cr-5 Ni-3 Mo (Type 2205) duplex stainless steels. It has a smooth running arc that results in a uniform bead that is flat to slightly convex.

Typical Chemistry Analysis						
C	Cr	Ni	Mo	Mn	Si	
0.04 max	21.5-23.5	8.5-10.5	2.5-3.5	0.5-2.0	1.00 max	
P	S	N	Cu			
0.04 max	0.3 max	0.08-0.20	0.75 max			

Typical Mechanical Properties	
Tensile Strength	115,000 psi
Yield Strength	90,000 psi
Elongation in 2"	27.0 %

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

COATED 2594-16

Specifications: AWS A5.4, ASME SFA 5.4-2006

Classification: E2594

Description:

The COATED Superduplex grade 2594 electrodes provide matching chemistry and mechanical property characteristics to wrought superduplex alloys such as 2507 and Zeron 100 as well as superduplex casting alloys (ASTM A890). The welding electrode is overalloyed with 2-3 percent in Nickel to provide the optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile/yield strength and superior resistance to SCC and pitting corrosion.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.04 max	24.0- 27.0	8.0- 10.5	3.5- 4.5	0.5- 2.0	1.00 max
P	S	N	Cu		
0.04 max	0.03 max	0.20- 0.30	0.75 max		

Typical Mechanical Properties	
Tensile Strength	130,000 psi
Yield Strength	101,000 psi
Elongation in 2"	31.0 %

Please note that not all of the Stainless Steel 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.

FLUX CORED 307C

Specifications: No AWS class.

Classification: Conforms to DIN Standard EN 12072, Class G 18 8 Mn.

Description:

FLUX CORED 307C is a composite, metal cored electrode for GMAW of stainless and certain types of other austenitic steels. It may also be used to weld armor steels and ferritic stainless steels in specific applications. The composite nature of FLUX CORED 307C provides higher deposition rates and a faster travel speeds than those achieved by solid electrodes. Shielding gas blends of 95-98% Ar/balance O2 and 75-95% Ar/balance CO2 can be used.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04	19.10	7.75	7.00	0.65	0.010	
S	Cu	Mo				
0.008	0.24	0.20				

Typical Mechanical Properties	
Tensile Strength	psi
Yield Strength	psi
Elongation % in 2"	%

*Using 100% CO2. Strength levels will be slightly higher w/AR+20-25% CO2

FLUX CORED 308H-T1

Specifications: AWS A5.22

Classification: E308HT1-1, E308HT1-4, E308T1-1, E308T1-4

Description:

FLUX CORED 308H-AP is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 20% Cr, 10% Ni and a carbon content of 0.04 to 0.08%. The higher carbon in this alloy makes it suitable for higher temperature use. It is designed for use with 100% CO2 or a blend of 75-80% Ar/balance CO2. Shielding gas mixtures with more than 75-80% Argon are not recommended.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04-0.08	18.0-21.0	9.0-11.0	0.5-2.5	1.0 max	0.04 max	
S	Cu	Mo	N			
0.03 max	0.5 max	0.05 max	0.05			

Typical Mechanical Properties*	
Tensile Strength	87,000 psi
Yield Strength	64,500 psi
Elongation % in 2"	42 %

*Using 100% CO2. Strength levels will be slightly higher w/AR+20-25% CO2

FLUX CORED 308L-T0

Specifications: AWS A5.22

Classification: E308LTO-1, E308LTO-4, E308TO-1, E308TO-4

Description:

FLUX CORED 308L-T0 is a gas-shielded, flux cored, stainless steel electrode designed to weld in flat and horizontal positions. It has a nominal weld metal composition of 20%Cr, 10%Ni and a maximum carbon content of 0.04%. The low carbon in this alloy minimizes carbide precipitation and makes it more resistant to intergranular corrosion. Arc transfer is smooth, with minimal spatter. It is designed for use with 100% CO2 shielding gas or a blend of 75-80% Ar/balance CO2.

Typical Chemistry Analysis						
C	Cr	Ni	Mn	Si	P	
0.04 max	18.0-21.0	9.0-11.0	0.5-2.5	1.0 max	0.04 max	
S	Cu	Mo	N			
0.03 max	0.5 max	0.05 max	0.05			

Typical Mechanical Properties*	
Tensile Strength	82,300 psi
Yield Strength	58,700 psi
Elongation % in 2"	38 %

*Using 100% CO2. Strength levels will be slightly higher w/AR+20-25% CO2

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



FLUX CORED 308L-T1

Specifications: AWS A5.22

Classification: E308LT1-1, E308LT1-4, E308T1-1, E308T1-4

Description:

FLUX CORED 308L-T1 is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 20% Cr, 10% Ni and a maximum carbon content of 0.04%. The low carbon in this alloy minimizes carbide precipitation and makes it more resistant to intergranular corrosion. It is designed for use with 100% CO₂ shielding gas or a blend of 75-80% Ar/balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	18.0- 21.0	9.0- 11.0	0.5 - 2.5	1.0 max	0.04 max
S	Cu	Mo	N		
0.03 max	0.5 max	0.05 max	0.05		

Typical Mechanical Properties*	
Tensile Strength	83,000 psi
Yield Strength	60,000 psi
Elongation % in 2"	38 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

FLUX CORED 308L-C

Specifications: AWS A5.9

Classification: EC308L, EC308

Description:

FLUX CORED 308L-C is a gas-shielded, metal cored, stainless steel electrode. It has a nominal weld metal composition of 19% Cr, 9.5% Ni and a maximum carbon content of 0.03%. The low carbon in this alloy minimizes carbide precipitation and makes it more resistant to intergranular corrosion. It produces little or no slag and virtually no spatter, minimizing cleanup. It is designed for use with Ar/1-2% O₂ or Ar/1-2% CO₂ shielding gases.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	19.50- 22.00	9.00- 11.00	0.75 max	1.00- 2.50	0.30- 0.65
P	S	N	Cu		
0.03 max	0.03 max	0.05	0.75 max		

Typical Mechanical Properties**	
Tensile Strength	82,600 psi
Yield Strength	57,000 psi
Elongation % in 2"	38 %

Ar-2%O₂

FLUX CORED 309L-T0

Specifications: AWS A5.22

Classification: E309LTO-1, E309LTO-4, E309TO, E309TO-4

Description:

FLUX CORED 309L-T0 is a gas-shielded, flux cored, stainless steel electrode designed to weld in the flat and horizontal positions. It has a nominal weld metal composition of 24%Cr and 13%Ni with a maximum carbon content of 0.04%. The low carbon minimizes carbide precipitation and makes the weld metal more resistant to intergranular corrosion. FLUX CORED 309L-T0 can be used with 100% CO₂ shielding gas or a blend of 75-80% Ar/balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	22.0- 25.0	12.0- 14.0	0.5 - 2.5	1.0 max	0.04 max
S	Cu	Mo	N		
0.03 max	0.5 max	0.05 max	0.05		

Typical Mechanical Properties*	
Tensile Strength	88,000 psi
Yield Strength	69,200 psi
Elongation % in 2"	32 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

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



FLUX CORED 309L-T1

Specifications: AWS A5.22

Classification: E309LT1-1, E309LT1-4, E309T1-1, E309T1-4

Description:

FLUX CORED 309L-T1 is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 24%Cr and 13%Ni with a maximum carbon content of 0.04%. The low carbon minimizes carbide precipitation and makes the weld metal more resistant to intergranular corrosion. FLUX CORED 309L-T1 can be used with 100% CO₂ shielding gas or a blend of 75-80% Ar/balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	22.0-25.0	12.0-14.0	0.5-2.5	1.0 max	0.04 max
S	Cu	Mo	N		
0.03 max	0.5 max	0.05 max	0.05		

Typical Mechanical Properties*	
Tensile Strength	85,100 psi
Yield Strength	66,900 psi
Elongation % in 2"	38 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

FLUX CORED 309L-C

Specifications: AWS A5.9

Classification: EC309L, EC309

Description:

FLUX CORED 309L-C is a gas-shielded, metal cored, stainless steel electrode. It has a nominal weld metal composition of 24%Cr and 13%Ni with a maximum carbon content of 0.03%. The low carbon minimizes carbide precipitation and makes the weld metal more resistant to intergranular corrosion. It operates with a smooth, spray arc transfer and produces little or no slag with virtually no spatter. It is designed for use with Ar/1-2% O₂ or Ar/1-2% CO₂ shielding gas.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	23.0-25.0	12.0-14.0	0.75 max	1.0-2.5	.030-0.65
P	S	N	Cu		
0.30 max	0.30 max	0.05	0.75 max		

Typical Mechanical Properties*	
Tensile Strength	84,000 psi
Yield Strength	64,200 psi
Elongation % in 2"	35 %

Using Ar+2% O₂

FLUX CORED 309LMo-T1

Specifications: AWS A5.22

Classification: E309LMoT1-1, E309LMoT1-4

Description:

FLUX CORED 309LMo-T1 is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 23%Cr, 13%Ni, 2.5%Mo and a maximum C content of 0.04%. The Mo provides increased resistance to pitting corrosion. The low carbon minimizes carbide precipitation and makes the weld more resistant to intergranular corrosion. 100% CO₂ shielding gas or a blend of 75-80% Ar/balance CO₂ can be used.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	22.0-25.0	12.0-14.0	0.5-2.5	1.0 max	0.04 max
S	Cu	Mo	N		
0.03 max	0.5 max	0.05 max	0.05		

Typical Mechanical Properties*	
Tensile Strength	95,100 psi
Yield Strength	72,000 psi
Elongation % in 2"	34 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

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



FLUX CORED 316L-T0

Specifications: AWS A5.22

Classification: E316LTO-1, E316LTO-4, E316TO-1,
E316TO-4

Description:

FLUX CORED 316L-T0 is a gas-shielded, flux cored, stainless steel electrode designed to weld in the flat and horizontal positions. It has a nominal weld metal composition of 19%Cr, 12.5%Ni, 2.5%Mo and a maximum carbon content of 0.04%. The presence of Mo improves resistance to pitting and provides increased creep resistance at elevated temperatures. The low carbon content minimizes carbide precipitation and makes it more resistant to intergranular corrosion. FLUX CORED 316L-T0 is designed for use with 100%CO₂ or a blend of 75-80% Ar/balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	17.0-20.0	11.0-14.0	0.5 - 2.5	1.0 max	0.04 max
S	Cu	Mo	N		
0.03 max	0.5 max	2.0 - 3.0	0.05		

Typical Mechanical Properties*	
Tensile Strength	82,000 psi
Yield Strength	64,000 psi
Elongation % in 2"	39 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

FLUX CORED 316L-T1

Specifications: AWS A5.22

Classification: E316LT1-1, E316LT1-4, E316T1-1,
E316T1-4

Description:

FLUX CORED 316L-T1 is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 19%Cr, 12.5%Ni, 2.5%Mo and a maximum carbon content of 0.04%. The presence of Mo improves resistance to pitting and provides increased creep resistance at elevated temperatures. The low carbon content minimizes carbide precipitation and makes it more resistant to intergranular corrosion. FLUX CORED 316L-T1 is designed for use with 100% CO₂ or a blend of 75-80% Ar/balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mn	Si	P
0.04 max	17.0-20.0	11.0-14.0	0.5 - 2.5	1.0 max	0.04 max
S	Cu	Mo	N		
0.03 max	0.5 max	2.0 - 3.0	0.05		

Typical Mechanical Properties*	
Tensile Strength	81,000 psi
Yield Strength	63,000 psi
Elongation % in 2"	39 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

FLUX CORED 316L-C

Specifications: AWS A5.9

Classification: EC316L, EC316

Description:

FLUX CORED 316L-C is a gas-shielded, metal cored, stainless steel electrode. It has a nominal weld metal composition of 19%Cr, 12.5%Ni, 2.5%Mo and a maximum carbon content of 0.03%. The presence of Mo improves resistance to pitting and provides increased creep resistance at elevated temperatures. The low C content minimizes carbide precipitation and makes it more resistant to intergranular corrosion. It is designed for use with Ar/1-2% O₂ or Ar/1-2% CO₂ gases.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03 max	18.0-20.0	11.0-14.0	2.0 - 3.0	1.0 - 2.5	0.30-0.65
P	S	N	Cu		
0.03 max	0.03 max	0.05	0.75 max		

Typical Mechanical Properties*	
Tensile Strength	82,900 psi
Yield Strength	63,100 psi
Elongation % in 2"	37 %

Using Ar+2% O₂

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

FLUX CORED 347-T1

Specifications: AWS A5.22

Classification: E347T1-1, E347T1-4

Description:

FLUX CORED 347-T1 is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 19.5%Cr, 10%Ni and 0.5%Cb (Nb). The Cb forms a stable carbide. This reduces chromium carbide precipitation and makes the weld metal more resistant to intergranular corrosion. FLUX CORED 347-T1 can be used with 100% CO₂ or a blend of 75-80% Ar/balance CO₂.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.08 max	18.0-21.0	9.0-11.0	0.5 max	0.5-2.5	1.0 max
P	S	N	Cu	Cb(Nb)+Ta	
0.04 max	0.03 max	0.05	0.5 max	8 x C min. 1.0 max	

Typical Mechanical Properties*	
Tensile Strength	94,000 psi
Yield Strength	63,000 psi
Elongation % in 2"	35 %

*Using 100% CO₂. Strength levels will be slightly higher w/AR+20-25% CO₂

FLUX CORED 409C

Specifications: AWS A5.9, ASME SFA 5.9

Classification: EC409

Description:

FLUX CORED 409C is a composite metal cored, stainless steel electrode for gas-shielded arc welding. This electrode is intended for welding of ferritic stainless thin gauge or sheet steel such as exhaust systems for trucks and automobiles. Arc transfer is a smooth spray with virtually no spatter emission. FLUX CORED 409C is designed for use with Ar/1-2% O₂ shielding gas.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.08 max	10.5-13.5	0.6 max	0.50 max	0.8 max	1.0 max
P	S	Cu	Cb(Nb)	Ti	
0.03 max	0.03 max	0.75 max	0.48	10xC min. 1.5 max	

Typical Mechanical Properties	
Tensile Strength	67,000 psi
Yield Strength	50,500 psi
Elongation	26 %

FLUX CORED 409Nb

Specifications: AWS A5.9, ASME SFA 5.9

Classification: EC409Nb

Description:

FLUX CORED 409Nb is a composite metal cored, stainless steel electrode for gas-shielded arc welding. This product is intended for welding ferritic stainless steel sheet and thin gauge material where Nb (Cb) stabilization is preferred over Ti. Arc transfer is a smooth spray with minimal spatter; bead appearance is smooth and clean. FLUX CORED 409Nb is designed for use with Ar/1-2% O₂ shielding gas.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.08 max	10.5-13.5	0.6 max	0.50 max	0.8 max	1.0 max
P	S	N	Cu	Nb+Ta	
0.04 max	0.03 max		0.75 max	10xC min / 0.75max	

Typical Mechanical Properties	
Tensile Strength	67,000 psi
Yield Strength	50,500 psi
Elongation	26 %

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

FLUX CORED 18CrCb-C

Specifications: No AWS Class

Classification:

Description:

A composite metal cored, stainless steel electrode, FLUX CORED 18CrCb-C is intended for welding thin stock and sheet steel of similar ferritic stainless composition 18%Cr, 0,6%Cb. Stabilization of the weld deposit is primarily with Cb (Nb). FLUX CORED 18CrCb-C is designed for use with 98%Ar/balance O2 shielding gas.

Typical Chemistry Analysis					
C	Cr	S	Mn	Si	P
0.03	17.70	0.010	0.66	0.58	0.010
Cb					
0.66					

Typical Mechanical Properties	
Tensile Strength	psi
Yield Strength	psi
Elongation % in 2"	%

FLUX CORED 2209T1-4

Specifications: AWS A5.22, ASME SFA 5.22

Classification: E2209T1-4

Description:

FLUX CORED 2209T1-4 is a flux cored, all position electrode designed to weld duplex stainless steels of 22Cr-5Ni-2Mo-N type. This wire normally gives ferrite in the range of 30-60 FN. FLUX CORED 2209T1 provides excellent notch toughness of 35 ft•lbs at -20°F and is designed for use with 100% CO2 or 75-80%Ar/balance CO2 shielding gas.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.04 max	21.0-24.0	7.5 - 10,0	2.5 - 4.0	0.50-2.00	1.00 max
P	S	N	Cu		
0.04 max	0.03 max	0.08-0,20	0.5 max		

Typical Mechanical Properties*	
Tensile Strength	121,000 psi
Yield Strength	98,000 psi
Elongation % in 2"	24 %

*Using 100% CO2. Strength levels will be slightly higher w/AR+20-25% CO2

FLUX CORED 2553T1-4

Specifications: AWS A5.22, ASME SFA 5.22

Classification: E2553T1-4

Description:

FLUX CORED 2553T1-4 is an all position flux cored wire with a nominal composition of 25% chromium, 9.5% nickel, 3.5% molybdenum, 2% copper and 0.2% nitrogen. It is used to weld duplex stainless steels which contain approximately 25% chromium. The weld metal exhibits high strength with excellent corrosion resistance, especially to pitting attack from chlorides in sea water. FLUX CORED 2553T1-4 is well suited for welding similar materials in the chemical and fertilizer industries, offshore pipelines, sour gas lines and offers greater resistance to intergranular corrosion, pitting and stress corrosion cracking than 2209.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Cu	Mn
0.03	25.40	9.50	3.80	2.20	1.10
Si	N	FN# (WRC)			
0.70	0.20	42			

Typical Mechanical Properties	
Tensile Strength	124,000 psi
Yield Strength	97,000 psi
Elongation % in 2"	24 %

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

FLUX CORED 2594T1-4

Specifications: AWS A5.22. ASME SFA 5.22

Classification: E2594T1-4

Description:

FLUX CORED 2594T1-4 is an all position flux cored wire that is designed for welding duplex (2500 family) and super-duplex (wrought UNS S32750 and S32760 and cast UNS J93380 and J93404) materials in the chemical and fertilizer industries, energy generation, flue gas desulphurization, and for many offshore applications including piping systems, pumps, valves and heat exchangers. FLUX CORED 2594T1-4 has a nominal composition of 25.5% chromium, 9.3% nickel, 3.5% molybdenum and 0.25% nitrogen. The Pitting Resistance Equivalent, given as $Cr + 3.3 * (Mo + 0.5W) + 16 * N$, is equal or greater than 40.

Typical Chemistry Analysis					
C	Cr	Ni	Mo	Mn	Si
0.03	25.40	9.60	3.80	1.50	0.70
W	N	FN# (WRC)			
0.55	0.24	48			

Typical Mechanical Properties*	
Tensile Strength	124,000 psi
Yield Strength	97,000 psi
Elongation % in 2"	20 %

Please note that not all of the Stainless Steel FC 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.