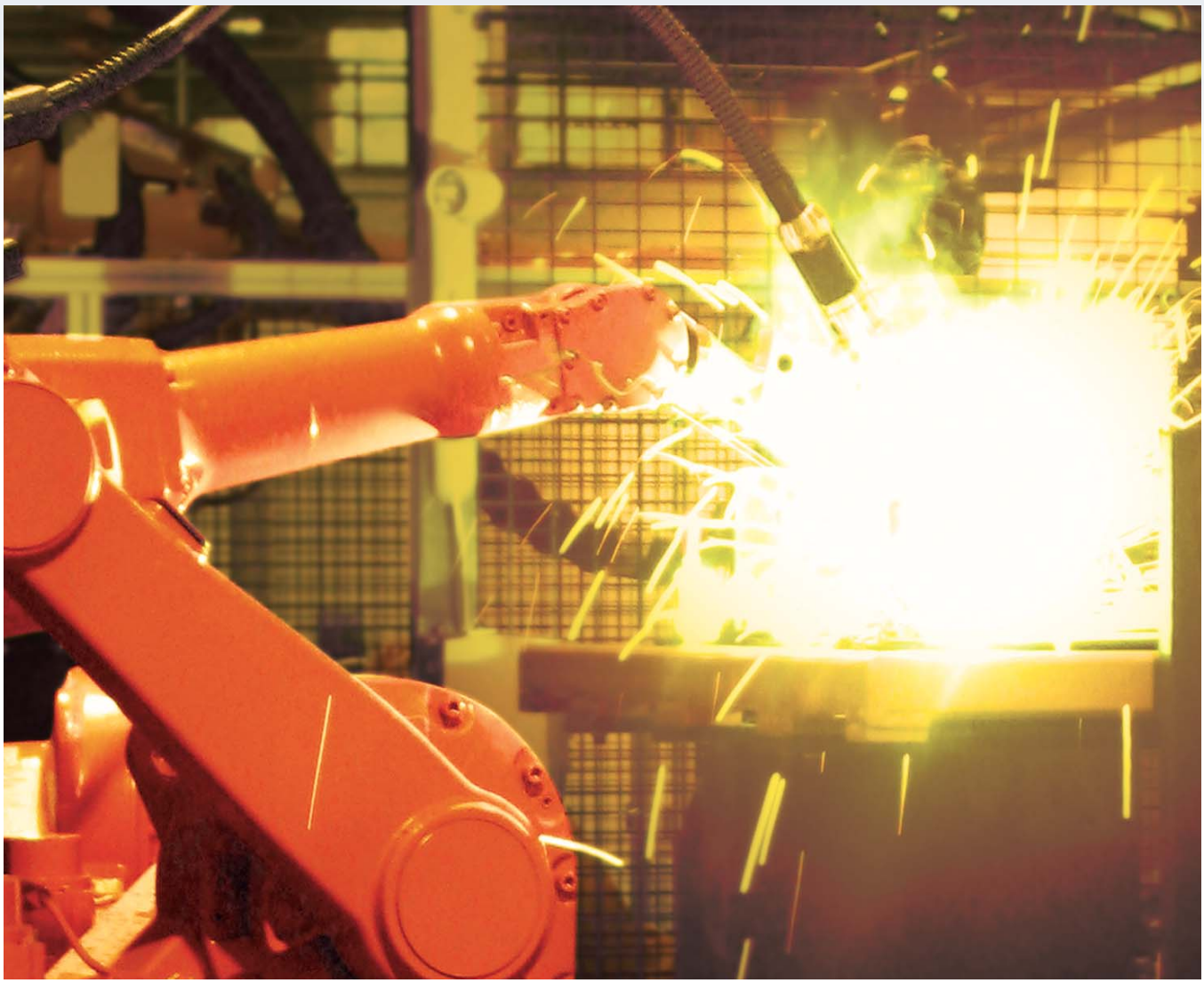
Coreweld®
Metal-Cored Wires



For faster, cleaner, more efficient welding

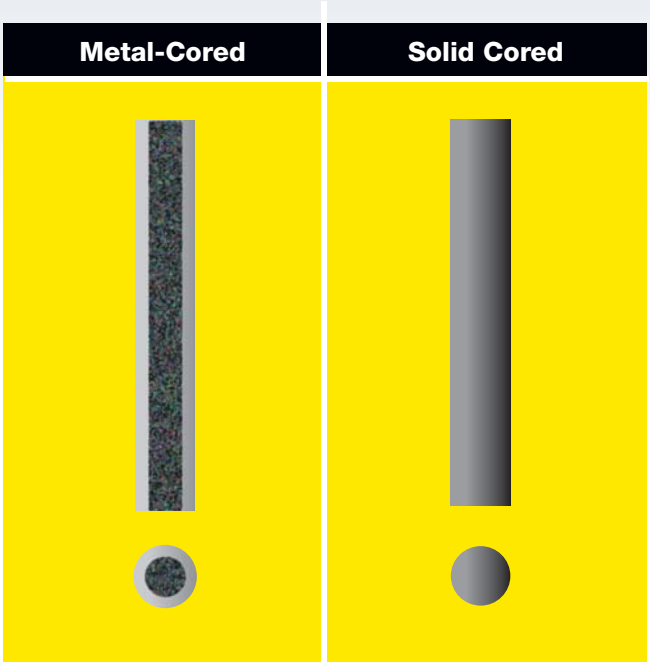
Why Use
Metal-Cored Wires?

In today's highly competitive market, where companies are constantly searching for ways to reduce cost and increase productivity, metal-cored wires may be an answer.

Metal-cored wires offer several advantages over their solid wire counterparts. Since metal-cored wires carry the current on the outer sheath, current densities are considerably higher than those found in solid wires where the load is carried across the entire cross-sectional area. As a result, the metal-cored arc tends to be softer and can bridge gaps easier with reduced tendency for burn-through. Metal-cored wires provide excellent arc stability and outstanding penetration and wetting, with excellent fusion at the root joint and sidewall. The result is a high-quality weld with minimal slag and spatter, and fewer residual silicon islands.

The higher current density can produce higher deposition rates and can also yield higher travel speeds than solid wires. In addition, the lower clean-up requirement and reduced need for post-weld operations can save significantly on labor costs and improve overall productivity. Although metal-cored wires cost more than solid wires, increases in efficiency and productivity, coupled with the reduction of labor costs for repairs and clean-up, typically lead to lower total costs.

Metal-cored wires can be used with equal success in both hand-held and automated welding scenarios, as well as in pulse welding. They also yield exceptional welds with high deposition rates and higher feed speeds than their solid wire counterparts.



Features and benefits.

+ High deposition rates and travel speeds
+ No slag and almost no spatter
+ Little to no postweld clean-up or cleaning between passes
+ Excellent side-wall fusion and root penetration
+ Ability to bridge part gaps without burn-through
+ Ability to weld thin materials at high amperages without burn-through
+ Ability to use next larger electrode diameter
+ Capability to weld out-of-position with pulsed spray or short-circuit transfer

Coreweld®
Premimum Metal-Cored Wires

ESAB Coreweld metal-cored wires have been developed to meet the needs of demanding applications such as structural steel construction, heavy equipment, transportation, bridges, petrochemical processing, offshore rigs, railcars, shipbuilding, pressure vessels, and general fabrication.

Utilizing advanced manufacturing processes and specially formulated composite fillers, Coreweld metal-cored wires combine high deposition rates, high deposition efficiencies, high travel speeds, excellent penetration, and ease of use. These qualities make Coreweld the brand of choice for operators who want to see production levels increase, costs decrease, and profits rise.

Coreweld 77HS was designed for high-speed robotic and automation applications. It offers the lowest slag/spatter of any of the Coreweld products – requiring virtually no clean up. Coreweld 77HS is ideal for automated applications where painting or finishing is needed after welding.

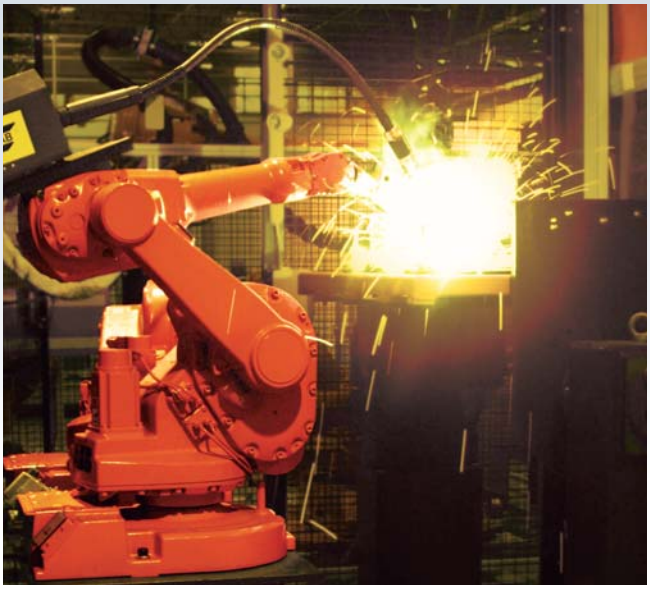
Coreweld C-6 offers the exceptionally high travel speeds critical for automation and produces outstanding deposition efficiencies. Our most popular metal-cored wire, Coreweld C-6 is an excellent choice for multiple applications.

Coreweld 70 is a high-efficiency wire with excellent arc characteristics and weld metal transfer. This metal-cored product is intended for use on carbon steels, and is ideal for use in applications with light rust and mill scale.

ESAB also offers a number of low-alloy wires uniquely formulated for specific metal types, including nickel, chrome-moly, HSLA, quenched and tempered steels. These wires combine the excellent arc characteristics and cost-savings of metal-cored wires with the mechanical properties that are crucial for demanding industries such as offshore oil, shipbuilding and heavy equipment.

Like all ESAB products, our metal-cored wires are backed by our technical support team, and satisfaction is 100% guaranteed. If you are currently using solid or flux-cored wire, a switch to metal-cored wire may be advantageous to you. Your ESAB sales representative would be happy to review your application to determine potential cost savings and aid in selecting the right filler metal for your needs.

Coreweld 77-HS
Metal-Cored Wire



TYPICAL MECHANICAL PROPERTIES	
As Welded	
Shielding Gas - 75% Ar / 25% CO_2	
Yield Strength	61 ksi, 420 MPa
Tensile Strength	75 ksi, 515 MPa
Reduction in Area	60%
Elongation% in 2”	32%
As Welded	
Shielding Gas - 90% Ar / 10% CO_2	
Yield Strength	62 ksi, 425 MPa
Tensile Strength	74 ksi, 510 MPa
Reduction in Area	58%
Elongation% in 2”	33%

High-speed automation on clean steel.

Coreweld 77HS is a metal-cored wire designed to run at fast travel speeds -- ideal for robotic applications. This leads to high deposition rates and ver few silica islands, facilitating faster cycle time when material finishing and painting are required.

Optimal performance is achieved with 90% Argon/ 10% CO_2 shielding gas. Coreweld 77HS is best used for single-pass automated applications on clean steel, but it is also capable of multi-pass, handheld semi-automatic applications as well.

CHARPY V-NOTCH PROPERTIES	
Testing Temperature @ -20°F (-29°C)	
As Welded, 75% Ar / 25% CO_2	38 ft-lbs, 52 J
As Welded, 90% Ar / 10% CO_2	63 ft-lbs, 85 J
Testing Temperature @ -40°F (-40°C)	
As Welded, 75% Ar / 25% CO_2	28 ft-lbs, 38 J
As Welded, 90% Ar / 10% CO_2	40 ft-lbs, 54 J

Classifications and Approvals

+ AWS A5.18: E70C-6M H4
+ ASME SFA 5.18
+ CWB CSA W48
+ D.N.V.-III YMS

Industries

+ Mobile Machinery
+ Railcar
+ General Fabrication
+ Automotive

Welding Position

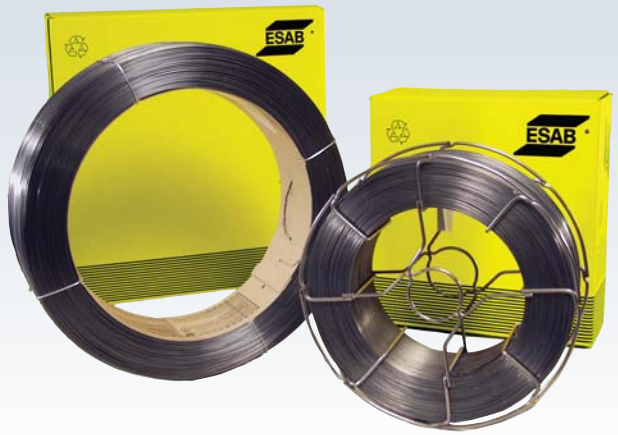
+ All-position when using short arc transfer or pulsed equipment.

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

WELD METAL ANALYSIS	
Shielding Gas, 75% Ar / 25% CO_2	
C	0.04%
Mn	0.9%
Si	0.7%
P	0.01%
S	0.015%
Ni	0.4%
Shielding Gas, 90% Ar / 10% CO_2	
C	0.04%
Mn	1.0%
Si	0.7%
P	0.01%
S	0.015%
Ni	0.4%

Coreweld C-6
Metal-Cored Wire



Excellent all-purpose wire.

Coreweld C-6 was developed for handheld, automatic, and robotic welding. It offers the exceptionally high travel speeds critical for automation, with enhanced productivity that makes it more cost-effective than solid wires. Special lubricants and surface treatment improve feedability and arc stability. This wire is ideal for flat or horizontal fillet welds, particularly in automated welding

Coreweld C-6 performs well with Argon/CO2 shielding gas mixes from 75%-92% Argon. It handles rust and mill scale with good sidewall tie-in and wetting, and offers broad operating parameters with excellent restart characteristics, very few silicon islands, and low spatter levels.

Classifications and Approvals

+ AWS A5.20: Seismic Certified “D”
+ AWS A5.18: E70C-6M H4
+ ASME SFA 5.18
+ Certified by CWB to CSA W48
+ A.B.S. - 3SA, 4YSA

Industries

+ Mobile Machinery
+ Rail Road Car
+ General Fabrication
+ Bridge Construction
+ Civil Construction
+ Automotive
+ Shipbuilding

Welding Position

+ All-position when using short arc transfer or pulsed equipment.

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

TYPICAL MECHANICAL PROPERTIES	
As Welded	
Shielding Gas - Argon 75% CO_2 25%	
Yield Strength	74 ksi, 505 MPa
Tensile Strength	86 ksi, 595 MPa
Elongation% in 2”	27%
Reduction in Area	64%
As Welded	
Shielding Gas - Argon 92% O_2 8%	
Yield Strength	79 ksi, 545 MPa
Tensile Strength	86 ksi, 595 MPa
Elongation% in 2”	25%
Reduction in Area	63%

CHARPY V-NOTCH PROPERTIES	
Testing Temperature @ -20°F (-29°C)	
As Welded, 92% Ar / 8% CO_2	56 ft-lbs, 78 J
As Welded, 75% Ar / 25% CO_2	38 ft-lbs, 52 J
Testing Temperature @ 0°F (-18°C)	
As Welded, 75% Ar / 25% CO_2	55 ft-lbs, 75 J

WELD METAL ANALYSIS	
Shielding Gas, 75% Ar / 25% CO_2	
C	0.04%
Mn	1.6%
Si	0.7%
P	0.012%
S	0.016%
Shielding Gas, 92% Ar / 8% CO_2	
C	0.04%
Mn	1.6%
Si	0.8%
P	0.015%
S	0.017%

Coreweld 70
Metal-Cored Wire

Robust wire designed for rust and mill scale.
Coreweld 70 is a tubular wire primarily comprised of metal powder along with additional arc stabilizers and alloying elements. Outstanding welds can be made on steel with light rust and mill scale. When used with an Argon mixture up to 92%, spatter levels are low and silica islands are minimal. Due to the high level of iron powder and low slag components, the only slag formed by this wire consists of small islands of silica.

Coreweld 70 was designed for multi-pass welding in robotic applications where slag removal between passes is difficult. This metal-cored product is intended for use on carbon steels having tensile strengths up to 70 ksi (485 MPa). Coreweld 70 wires from 0.045” up to 1/16” are capable of being welded out-of-position when using pulsed arc equipment.

Classifications and Approvals

+ AWS A5.18: E70C-6M
+ ASME SFA 5.18
+ Certified by C.W.B. - CSA W48
+ D.N.V.-III YMS(H10)
+ L.R.-33,3YS(H10)
+ B.V.-SA3YM(HH)
+ TUV
+ DUETSCHE BAHN
+ G.L.-3YH10S

Welding Position

+ Flat/horizontal for 5/64” and larger.
+ All-position for .045 - .062 when using short arc transfer or pulsed equipment.

Industries

+ Automotive
+ Mobile Machinery
+ General Fabrication
+ Power Generation
+ Bridge Construction
+ Civil Construction
+ Pipeline
+ Shipbuilding
+ Rail Road Car

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

TYPICAL MECHANICAL PROPERTIES	
As Welded 75% Ar / 25% CO_2	
Yield Strength	68 ksi, 460 MPa
Tensile Strength	80 ksi, 550 MPa
Elongation in 2”	28%
Reduction in Area	67%
As Welded 92% Ar / 8% CO_2	
Yield Strength	79 ksi, 545 MPa
Tensile Strength	85 ksi, 585 MPa
Elongation in 2”	26%
Reduction in Area	65%

CHARPY V-NOTCH PROPERTIES	
Testing Temperature 0°F (-18°C)	
As Welded 75% Ar / 25% CO_2	50 ft-lb, 68 J
As Welded 92% Ar / 8% CO_2	60 ft-lb, 81 J
Testing Temperature -20°F (-29°C)	
As Welded 75% Ar / 25% CO_2	40 ft-lb, 54 J
As Welded 92% Ar / 8% CO_2	50 ft-lb, 68 J
Testing Temperature -40°F (-40°C)	
As Welded 75% Ar / 25% CO_2	30 ft-lb, 41 J
As Welded 92% Ar / 8% CO_2	35 ft-lb, 47 J

WELD METAL ANALYSIS	
75% Ar / 25% CO_2	
C	0.06%
Mn	1.4%
Si	0.6%
P	0.010%
S	0.019%
92% Ar / 8% CO_2	
C	0.06%
Mn	1.5%
Si	0.6%
P	0.009%
S	0.019%

Coreweld 88HS-Ni1
Metal-Cored Wire

TYPICAL MECHANICAL PROPERTIES	
As Welded 75% Ar / 25% CO_2	
Yield Strength	69.6 ksi, 480 MPa
Tensile Strength	83.6 ksi, 576 MPa
Elongation in 2”	27%
Reduction in Area	60%
As Welded 90% Ar / 10% CO_2	
Yield Strength	74.3 ksi, 512 MPa
Tensile Strength	86.7 ksi, 598 MPa
Elongation in 2”	26%
Reduction in Area	58%

Coreweld 88HS-Ni1 is a nickel low alloy metal cored wire designed specifically for high speed welding where a clean weld surface is required. Coreweld 88HS-Ni1 deposits have very few silicon islands and almost no slag at the weld toes.

Coreweld 88HS-Ni1 is recommended primarily for robotic or mechanized high speed welding of sheet steel. Welding speeds up to 90 in/min are possible when welding vertical down. The low slag level of Coreweld 88HS-Ni1 minimizes post weld clean up. For this reason, Coreweld 88HS-Ni1 gives special advantage in applications where post weld coating or painting is specified.

CHARPY V-NOTCH PROPERTIES	
Absorbed Energy at -50°F (-46°C)	
As Welded 75% Ar / 25% CO_2	28 ft-lb, 37 J
As Welded 90% Ar / 10% CO_2	29 ft-lb, 39 J

Classifications and Approvals

+ AWS A5.28: E80C-Ni1H8

Industries

+ General Fabrication
+ Rail Car
+ Power Poles

Welding Position

+ All-position wire

+ Recommended Shield Gas

+ 75% - 90% Ar / 25% - 10% CO_2

WELD METAL ANALYSIS	
75% Ar / 25% CO_2	
C	0.053%
Mn	1.23%
Si	0.55%
P	0.010%
S	0.016%
Ni	0.96%
90% Ar / 10% CO_2	
C	0.051%
Mn	1.31%
Si	0.61%
P	0.011%
S	0.017%
Ni	0.95%

Coreweld 80C-Ni1
Metal-Cored Wire

Coreweld 80C-Ni1 is a metal-cored wire for applications where low temperature impact toughness or weathering characteristics are required. Operating over a broad range of parameters, Coreweld 80C-Ni1 produces a smooth spray transfer with minimal fume and spatter, and is tolerant of light rust and mill scale.

The recommended shielding gas used is Ar 75-92% / 25-8% CO2. Coreweld 80C-Ni1 is alloyed with 1% Ni to provide good low temperature impact toughness. It also meets the requirement in AWS D1.1 and D1.5 for use on unpainted weathering steels. It is suitable for maink single- or multi-pass welds in the flat or horizontal position using conventional (DCEP or DCEN) or pulsed power.

Classifications and Approvals

+ AWS A5.28: E80C-Ni1
+ ASME SFA 5.28

Industries

+ Bridge Construction
+ Mobile Machinery
+ General Fabrication
+ Process

Welding Position

+ All-position when using short arc transfer or pulsed equipment.

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

TYPICAL MECHANICAL PROPERTIES	
Shielding Gas - 85% Ar / 15% CO_2	
Yield Strength	70 ksi, 485 MPa
Tensile Strength	82 ksi, 565 MPa
Reduction in Area	66%
Elongation% in 2”	27%

CHARPY V-NOTCH PROPERTIES	
Absorbed Energy @ -50°F (-46°C)	
As Welded, 75% Ar / 25% CO_2	28 ft-lbs, 37 J
As Welded, 90% Ar / 10% CO_2	29 ft-lbs, 39 J

WELD METAL ANALYSIS	
Shielding Gas, 85% Ar / 15% CO_2	
C	0.04%
Mn	1.5%
Si	0.3%
P	0.01%
S	0.02%
Ni	0.9%

Coreweld 80-D2
Metal-Cored Wire

Coreweld 80-D2 is a metal-cored wire equivalent to ER80S-D2 solid wire. Coreweld 80-d2 produces higher deposition rates and better wetting action, with an absence of copper coating on the wire. Coreweld 80-D2 was developed for HSLA steels, and is capable of single- or multiple-pass welding.

Classifications and Approvals

+ AWS A5.28: E80C-G H4
+ ASME SFA 5.28

Industries

+ Process
+ Mobile Machinery
+ General Fabrication
+ Automotive

Welding Position

+ All-position when using short arc transfer or pulsed equipment.

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

TYPICAL MECHANICAL PROPERTIES	
Shielding Gas - Argon 75% CO_2 25%	
Yield Strength	77 ksi, 530 MPa
Tensile Strength	90 ksi, 620 MPa
Reduction in Area	62%
Elongation% in 2”	26%
Stress Relieved 8 hrs. @ 1175°F (635°C)	
Yield Strength	77 ksi, 530 MPa
Tensile Strength	90 ksi, 620 MPa
Elongation% in 2”	26%
Reduction in Area	68%

CHARPY V-NOTCH PROPERTIES	
Testing Temperature @ -20°F (-29°C)	
As Welded, 75% Ar / 25% CO_2	34 ft-lbs, 46 J
Stress Relieved 8 hrs. @ 1175°F (635°C)	25 ft-lbs, 34 J
Testing Temperature @ -40°F (-40°C)	
As Welded, 75% Ar / 25% CO_2	23 ft-lbs, 31 J

WELD METAL ANALYSIS	
Shielding Gas, 75% Ar / 25% CO_2	
C	0.09%
Mn	1.6%
Si	0.5%
P	0.01%
S	0.01%
Mo	0.5%

Coreweld 110
Metal-Cored Wire

TYPICAL MECHANICAL PROPERTIES	
Shielding Gas - Argon 92% CO_2 8%	
Yield Strength	113 ksi, 770 MPa
Tensile Strength	121 ksi, 835 MPa
Elongation% in 2”	20%

CHARPY V-NOTCH PROPERTIES	
Testing Temperature @ 0°F (-18°C)	
As Welded, 92% Ar / 8% CO_2	35 ft-lbs, 47 J
Testing Temperature @ -60°F (-51°C)	
As Welded, 92% Ar / 8% CO_2	30 ft-lbs, 41 J

Coreweld 110 is a metal-cored electrode designed for single- and multi-pass welding of high-strength low alloy steels, such as T-1, HY-80, and HY-100. The arc is smooth with virtually no spatter. Coreweld 110 is recommended for welding quenched and tempered high-strength steels. Because of the metallic core, the wire offers both the high deposition rates of a flux-cored electrode and the high efficiencies of a solid wire.

Classifications and Approvals

+ AWS A5.28: E110C-G
+ ASME SFA 5.28

Industries

+ Bridge Construction
+ Shipbuilding

Welding Position

+ Flat/horizontal
+ All-position when using short arc transfer or pulsed equipment

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

WELD METAL ANALYSIS	
Shielding Gas, 92% Ar / 8% CO_2	
C	0.05%
Mn	1.5%
Si	0.3%
P	0.01%
S	0.01%
Mo	0.6%
Ni	2.5%

Coreweld W
Metal-Cored Wire

Coreweld W is a metal-cored wire designed for single- or multi-pass welding on weathering grade steels. Coreweld W was designed specifically to meet the demand for weld deposits that color match the low alloy, high-strength weathering grade steels, such as A588, A242, U.S.S. Cor-Ten and Mayari R.

Classifications and Approvals

+ AWS A5.28: E80C-G H4
+ ASME SFA 5.28
+ DEUTSCHE BAHN

Industries

+ Shipbuilding
+ General Fabrication
+ Mobile Machinery
+ Rail Road Car
+ Civil Construction
+ Bridge Construction

Welding Position

+ Flat/horizontal
+ All-position when using short arc transfer or pulsed equipment

Recommended Shield Gas

+ 75% - 92% Ar / 25% - 8% CO_2

TYPICAL MECHANICAL PROPERTIES	
Shielding Gas - Argon 75% CO_2 25%	
Yield Strength	81 ksi, 560 MPa
Tensile Strength	90 ksi, 620 MPa
Elongation% in 2”	26%

CHARPY V-NOTCH PROPERTIES	
Testing Temperature @ -20°F (-29°C)	
As Welded, 75% Ar / 25% CO_2	38 ft-lbs, 52 J
Testing Temperature @ -60°F (-51°C)	
As Welded, 75% Ar / 25% CO_2	24 ft-lbs, 33 J

WELD METAL ANALYSIS	
Shielding Gas, 75% Ar / 25% CO_2	
C	0.04%
Mn	1.3%
Si	0.7%
P	0.008%
S	0.012%
Cr	0.6%
Ni	0.7%
Cu	0.6%

Welding Parameters

Coreweld 77-HS, Coreweld C-6, Coreweld 80-B2, Coreweld 88HS-Ni1, Coreweld 80C-Ni1, Coreweld 80-D2, Coreweld 110 and Coreweld W

DEPOSITION TABLE - 90% Ar / 10% CO_2						
Diameter in (mm)	Amps	Volts	Wire Feed Speed ipm (cm/min)	Deposition lb/hr (kg/hr)	Efficiency %	Electrical Stickout in (mm)
.045 (1.2)	200	27	250 (640)	6.5 (3.0)	95	5/8 (15.8)
	260	28	350 (890)	9.1 (4.1)	97	
	290	29	400 (1020)	10.2 (4.6)	98	
	330	32	500 (1270)	12.7 (5.8)	99	
	360	33	550 (1400)	13.9 (6.3)	99	
.052 (1.4)	190	26	180 (440)	5.5 (2.5)	94	5/8 (15.8)
	240	27	250 (640)	7.7 (3.5)	95	
	280	28	300 (760)	9.2 (4.2)	97	
	340	31	400 (1020)	11.2 (5.1)	99	
	410	36	530 (1330)	15.7 (7.1)	99	
1/16 (1.6)	230	26	150 (380)	6.2 (2.81)	91	3/4 (19.1)
	290	27	200 (510)	8.8 (4.0)	95	
	340	29	250 (640)	12.3 (5.6)	98	
	430	32	350 (890)	15.9 (7.2)	99	
	510	36	480 (1210)	20.7 (9.4)	99	

DEPOSITION TABLE - 75% Ar / 25% CO_2						
Diameter in (mm)	Amps	Volts	Wire Feed Speed ipm (cm/min)	Deposition lb/hr (kg/hr)	Efficiency %	Electrical Stickout in (mm)
.045 (1.2)	170	24	200 (510)	5.2 (2.4)	94	5/8 (15.8)
	230	25	300 (760)	7.7 (3.5)	96	
	290	27	400 (1020)	10.2 (4.6)	98	
	330	29	500 (1270)	12.7 (5.8)	99	
	390	32	650 (1650)	16.5 (7.5)	99	
.052 (1.4)	190	24	180 (440)	5.5 (2.5)	94	5/8 (15.8)
	240	25	250 (640)	7.7 (3.5)	95	
	310	27	350 (890)	10.7 (4.9)	98	
	370	30	450 (1140)	13.6 (6.2)	99	
	420	32	550 (1400)	16.6 (7.5)	99	
1/16 (1.6)	230	24	150 (380)	6.2 (2.81)	91	3/4 (19.1)
	290	26	200 (510)	8.8 (4.0)	95	
	370	28	280 (700)	12.5 (5.7)	96	
	430	29	350 (890)	15.9 (7.2)	99	
	510	33	480 (1210)	20.7 (9.4)	99	

Welding Parameters

Coreweld 70

DEPOSITION TABLE - 75% Ar / 25% CO_2						
Diameter in (mm)	Amps	Volts	Wire Feed Speed ipm (cm/min)	Deposition lb/hr (kg/hr)	Efficiency %	Electrical Stickout in (mm)
.035 (0.9)	150	25	320 (813)	4.4 (1.2)	92	1/2 (12.7)
	200	27	472 (1199)	6.5 (2.95)	92	
	250	29	680 (1727)	9.4 (4.26)	92	
.045 (1.2)	250	28	330 (838)	8.0 (3.63)	90	5/8 (15.8)
	275	30	430 (1092)	11.1 (5.03)	94	
	300	32	464(1179)	11.6 (5.26)	94	
	350	32	512 (1300)	12.7 (5.76)	96	
.052 (1.4)	275	29	262 (665)	8.0 (3.63)	92	5/8 (15.8)
	300	29	312 (792)	9.6 (4.35)	93	
	325	30	328 (833)	10.1 (4.58)	93	
1/16 (1.6)	300	30	181 (460)	8.6 (3.90)	89	3/4 (19.1)
	350	30	241 (612)	11.9 (5.40)	94	
	400	32	293 (744)	14.6 (6.62)	94	
	450	34	333 (846)	16.2 (7.35)	94	
5/64 (2.0)	350	27	160 (406)	11.6 (5.26)	94	1 (25.4)
	400	28	185 (470)	13.2 (5.99)	95	
	450	28	210 (533)	15.8 (7.17)	97	
	500	29	280 (711)	20.4 (9.25)	97	
3/32 (2.4)	400	31	115 (292)	11.5 (5.22)	95	1 (25.4)
	450	31	138 (350)	14.5 (6.58)	97	
	500	32	155 (394)	16.5 (7.48)	97	
	550	32	197 (500)	21.0 (9.53)	98	

Data reflects use of 75% Argon/25% CO_2 gas shielding. Deposition rates and efficiencies will increase approximately 1% with use of 92% Argon/8% CO_2 shielding.

ESAB Filler Metals

Proudly Made in the USA.

Utilizing years of experience and some of the industry's most advanced technologies, ESAB has proudly supported the growth and development of the welding industry throughout the world. Our facilities in Central Pennsylvania have been producing many of the welding filler metal brands you have come to know and trust since 1940.

With a dedicated staff of world-class research engineers and scientists, ESAB proudly continues its tradition of pioneering new processes and developing new products. Continuous interaction with customers has led us to invent solutions for an array of welding applications in nearly every industrial sector.

Once in production, every item that leaves our 400,000 sq. ft. manufacturing facility is assured to meet the quality you deserve – guaranteed! Whatever your filler metal requirements, ESAB has the products you need and the quality you can trust.

Be safe when welding or cutting.
Please read and understand the safety labels, instruction manuals, and/or safety data sheet for your welding or cutting product before you weld or cut. Always follow safe practices and use adequate ventilation when welding or cutting. More information on welding health and safety can be found at www.esabna.com.

NOTICE:
Test results described above were obtained under controlled laboratory conditions, and are not guarantees for use in the field. Actual use of the product may produce varying results due to conditions and welding techniques over which ESAB has no control, including but not limited to plate chemistry, weldment design, fabrication methods, wire size, welding procedure, service requirements and the environment. The User should confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CAUTION:
Users should be thoroughly familiar with the safety precautions referenced in the product label for the relevant product and the Safety Data Sheet for the product. Safety Data Sheets are available at www.esabna.com or by calling 1-800-ESAB-123.

STRENGTH THROUGH **COOPERATION**

ESAB Welding & Cutting Products / esabna.com / 1.800.ESAB.123

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