



GEN⁴ WELDING

CENTRAL WIRE INDUSTRIES

**EVOLUTIONARY
WELDING
WIRE**

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DESIGNED FOR DEMANDING APPLICATIONS



- Aerospace
- Automotive
- Petrochemical Process Manufacturing
- Oil & Gas
- Power Generation
- Fabrication
- Chemical
- Food & Beverage Industry



Central Wire Industries (CWI) is proud to reintroduce its welding consumables to the global market! CWI Gen⁴ Welding is the innovative and advanced new line of specialty alloy welding wire products produced by CWI. Backed by over 50 years of experience in stainless steel, nickel, and copper alloy wire production, manufactured in Canada, the United States, and the United Kingdom, CWI Gen⁴ Welding Wire is available from stock wherever you need it.

Gen⁴ products are available for shielded metal arc welding (SMAW), submerged arc welding (SAW), tungsten inert gas welding (TIG) and gas metal arc welding (MIG), to name a few processes. The product range of grades includes stainless steel, nickel and high nickel-based alloys, and copper, with specialty alloys available upon request.

Numerous packaging and shipping options are available direct from our multiple manufacturing and distribution locations so you can get what you need, when and where you need it.



Gen⁴ Grade Summary

STAINLESS

GEN 300 SERIES

307, 308, 308H, 308L, 308Si, 308LSi, 309, 309L, 309Si, 309LSi, 309LMo, 310, 312, 316, 316L, 316Si, 316LSi, 317L, 320LR, 330, 347, 385

GEN 400 SERIES

409Nb, 410, 410NiMo, 420, 430

GEN HIGH STRENGTH

630 (17-4PH)

GEN DUPLEX

2209 (Duplex),
2594 (Super Duplex)

NICKEL

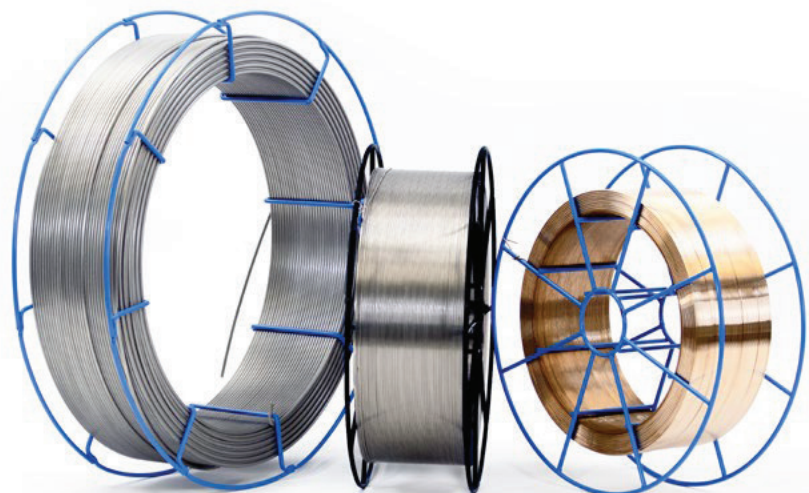
GEN NICKEL

55, 72, 99, 208, 276, 413, 418, 606, 617, 622, 622LHIW, 625, 625LHIW, 718, 825

COPPER

GEN 300 SERIES

C189 (Deoxidized Copper),
C656 (Silicon Bronze)



GEN⁴ STAINLESS STEEL WELDING WIRE



Recommended Welding Procedures for Gen⁴ Stainless Steel Welding Wire

Process	Diameter of Wire		Voltage (V)	Amperage (A)	Gas
TIG	0.035"	0.9 mm	12-15	60-90	100% Argon
	0.045"	1.1 mm	13-16	80-110	100% Argon
	1/16"	1.6 mm	14-18	90-130	100% Argon
	3/32"	2.4 mm	15-20	120-175	100% Argon
	1/8"	3.2 mm	15-20	150-220	100% Argon
MIG	0.030"	0.8 mm	24-28	140-180	99% Argon + 1% Oxygen or 97% Argon + 3% CO ₂
	0.035"	0.9 mm	26-29	160-210	99% Argon + 1% Oxygen or 97% Argon + 3% CO ₂
	0.045"	1.1 mm	28-32	180-250	99% Argon + 1% Oxygen or 97% Argon + 3% CO ₂
SAW	0.0625"	1.6 mm	29-33	200-280	Suitable Flux may be used
	3/32"	2.4 mm	28-30	275-350	Suitable Flux may be used
	1/8"	3.2 mm	29-32	350-450	Suitable Flux may be used
	5/32"	4.0 mm	30-33	400-550	Suitable Flux may be used

Typical Chemical Composition of Gen⁴ of Stainless Steel Wires

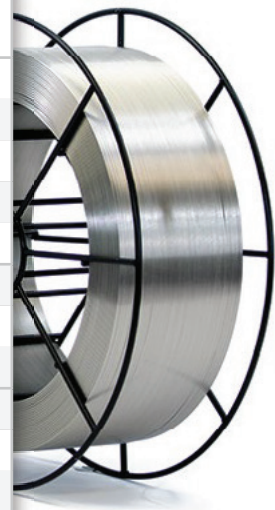
Product	Specifications - AWS A5.9	C	Mn	Si	Fe	Cr	Mo	Ni	Nb+Ta	N	S	P	Cu	FN
GEN 307*		0.07	6.60	0.90	Bal	18.70		8.90			0.007	0.015		5
GEN 308/308H	ER308H	0.05	1.65	0.46	Bal	20.45		9.85			0.005	0.016		8
GEN 308/308L	ER308L	0.019	1.72	0.46	Bal	20.80		10.10			0.003	0.013		8
GEN 308Si/309Lsi	ER308Lsi	0.016	1.65	0.85	Bal	20.65		10.00			0.008	0.016		8
GEN 309/309L	ER309L	0.021	1.75	0.51	Bal	23.40		12.70			0.006	0.014		12
GEN 309Si/309Lsi	ER309Lsi	0.019	1.85	0.84	Bal	23.50		12.95			0.004	0.012		10
GEN 310	ER310	0.11	1.90	0.40	Bal	38.10		20.95			0.003	0.012		0
GEN 312	ER312	0.11	1.64	0.44	Bal	29.60		8.90			0.012	0.017		30 min
GEN 316/316L	ER316L	0.016	1.87	0.48	Bal	19.32	2.25	13.20			0.010	0.019		6
GEN 316Si/316Lsi	ER316Lsi	0.022	1.80	0.85	Bal	19.25	2.45	12.60			0.004	0.013		8
GEN 317L	ER317L	0.017	1.66	0.44	Bal	19.40	3.25	13.85			0.006	0.012		6
GEN 320LR	ER320LR	0.025	1.60	0.05	Bal	19.60	2.50	34.10	0.25		0.001	0.007	3.40	0
GEN 330	ER330	0.23	1.95	0.42	Bal	15.95		35.20			0.005	0.014		0
GEN 347	ER347	0.04	1.65	0.52	Bal	19.90		9.75	0.72		0.005	0.014		10
GEN 385	ER385	0.019	2.05	0.35	Bal	20.50	4.60	25.10			0.015	0.014	1.60	0
GEN 409Nb	ER410NiMo	0.05	0.62	0.48	Bal	11.50			0.35		0.016	0.018		
GEN 410	ER410	0.11	0.45	0.39	Bal	12.50					0.010	0.014		
GEN 410NiMo	ER410NiMo	0.02	0.45	0.40	Bal	11.80	0.55	4.50			0.009	0.012		
GEN 420	ER420	0.29	0.45	0.35	Bal	13.20					0.008	0.014		
GEN 430	ER430	0.07	0.44	0.36	Bal	16.50					0.010	0.014		
GEN 430LCb	ER430LCb	0.01	0.51	0.40	Bal	18.20			0.40		0.008	0.020		
GEN 630	ER630	0.03	0.54	0.43	Bal	16.49	0.20	4.78	0.22		0.021	0.017	3.60	
GEN 2209	ER2209	0.016	1.40	0.45	Bal	22.40	3.20	8.50		0.18	0.017	0.014		40 min
GEN 2594	ER2594	0.07	1.00	1.00	Bal	25.50	3.95	9.25		0.25	0.010	0.025	0.50	40 min

*EN ISO 14343

GEN⁴ NICKEL WELDING WIRE

Recommended Welding Procedures for Gen⁴ Nickel Welding Wire

Process	Diameter of Wire		Voltage (V)	Amperage (A)	Gas
TIG	0.035"	0.9 mm	12-15	60-90	100% Argon
	0.045"	1.1 mm	13-16	80-110	100% Argon
	1/16"	1.6 mm	14-18	90-130	100% Argon
	3/32"	2.4 mm	15-20	120-175	100% Argon
	1/8"	3.2 mm	15-20	150-220	100% Argon
MIG	0.035"	0.9 mm	26-29	150-190	75% Argon + 25% Helium
	0.045"	1.2 mm	28-32	180-220	75% Argon + 25% Helium
	1/16"	1.6 mm	29-33	200-250	75% Argon + 25% Helium
SAW	3/32"	2.4 mm	28-30	275-350	Suitable Flux may be used
	1/8"	3.2 mm	29-32	350-450	Suitable Flux may be used
	5/32"	4.0 mm	30-33	400-550	Suitable Flux may be used



Typical Chemical Composition of Gen⁴ of Nickel Wires

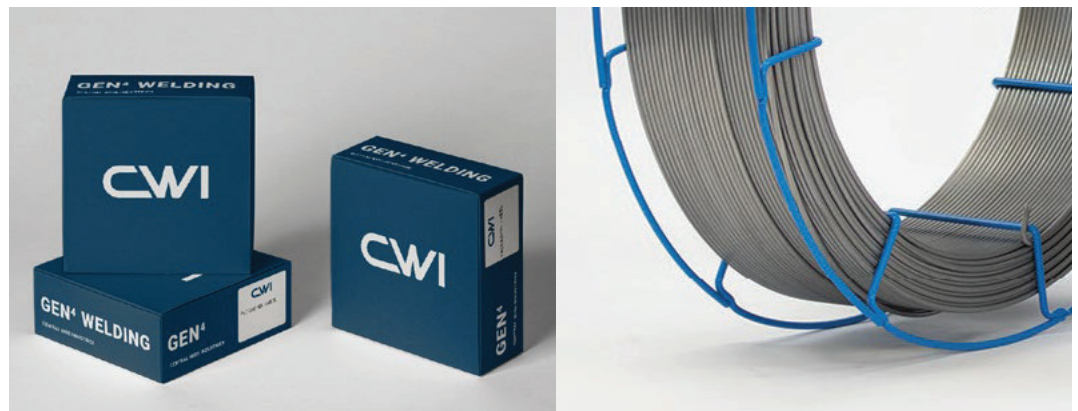
Product	Specifications AWS A5.14	C	Mn	Si	Fe	Cr	Mo	Ni	Nb+ Ta	W	S	P	Al	Ti	Cu
GEN 55		0.05	0.25	0.15	43.60			55.90							
GEN 72	ERNiCr-4	0.03				43.60		Bal						0.50	
GEN 99	ERNiCr (AWS AS.15)	0.05	0.22	0.05				99.60							
GEN 208 (FM 61)	ERNi-1	0.06	0.30	0.40	0.10			95.50			0.003	0.008	0.50	3.0	<.15%
GEN 276	ERNiCrMo-4	0.01	0.55	0.04	5.50	15.55	16.10	Bal		3.65	0.002	0.009			
GEN 413 (FM 67)	ERCuNi (AWS A5.7)		0.75	0.10	0.55			1.0				0.006		0.35	Bal
GEN 418 (FM 60)	ERNiCu-7	0.05	3.45	0.77	0.40			65.20			0.002	0.009	0.10	2.25	Bal
GEN 606 (FM 82)	ERNiCr-3	0.03	2.85	0.22	1.10	20.40		72.90	2.50		0.001	0.003			
GEN 617 (FM 617)	ERNiCrCoMo-1	0.06	0.20	0.11	0.75	21.80	9.05	Bal			0.001	0.005	1.25	0.25	12.45Co
GEN 622/622LHIW (FM 622)*	ERNiCrMo-10	0.008	0.20	0.04	3.10	21.50	13.50	Bal		3.50	0.002	0.005			
GEN 625/625LHIW (FM 625)*	ERNiCrMo-3	0.009	0.05	0.12	0.62	21.90	8.65	64.50	3.70		0.002	0.006	0.17	0.19	
GEN 686	ERNiCrMo-14	0.01	1.00	0.08	5.00	0.50	16.50	Bal		3.80	0.02	0.02	0.50	0.25	0.50
GEN 718 (FM 718)	ERNiFeCr-2	0.04	0.25	0.20	17.55	19.0	3.10	53.30	5.05		0.004	0.001	0.40	0.90	
GEN 825 (FM 65)	ERNiFeCr-1	0.01	0.45	0.25	29.0	21.50	3.10	42.60			0.001	0.015	0.10	1.0	2.0

*Low Heat Input Wire

GEN⁴ WIRE DIAMETERS

Wire Diameters by Welding Type						
MIG (GMAW) Diameters		TIG (GTAW) Diameters		SUB ARC (SAW) Diameters		Sample Sizes of Diameters
Imperial in.	Metric mm	Imperial in.	Metric mm	Imperial in.	Metric mm	
0.023	0.6	1/16	1.6	5/64	2	● 1/16
0.030	0.8	3/32	2.4	3/32	2.4	● 5/64
0.035	0.9	1/8	3.2	1/8	3.2	● 3/32
0.045	1.14	5/32	4.0	5/32	4	● 1/8
0.047	1.2	3/16	4.8			● 5/32
1/16	1.6					● 3/16

Note: Unless a customer specifies that the exact metric size is required, standard imperial size will be substituted. For example, 0.045 inches will be supplied for 1.2mm wire unless exact metric size is specified at the time of order.



GEN⁴ PACKAGING OPTIONS

Packaging Options for GEN ⁴ Welding Wire					
Item	Standard Packaging	Pallet Weight	MIG (GMAW)	TIG (GTAW)	SUB ARC (SAW)
2 lbs. (0.9 kg) Spool	20 Spools - 40 lbs. (18 kg)/box	240, 480 lbs. (216 kg)	A		
10 lbs. (4.5 kg) Spool	4 Spools - 40 lbs. (18 kg)/box	48, 480 lbs. (216 kg)	A		
33 lbs. (15 kg) Pastic Spool	1 Spool - 33 lbs. (15 kg)/box	42, 1,386 lbs. (629 kg)	S		
33 lbs. (15 kg) Wire Spool	1 Spool - 33 lbs. (15 kg)/box	42, 1,386 lbs. (629 kg)	S		
50 lbs. (23 kg) Fibre Spool	24 Spools/Pallet	24, 1,200 lbs. (544 kg)	S		
60 lbs. (27 kg) Coil	1 Coil - 60 lbs. (27 kg)/box	20, 1,200 lbs. (998 kg)			S
10 lbs. (4.5 kg) Tubes (36")	3 Tubes - 30 lbs. (13.5 kg)/box	35, 1,050 lbs. (478 kg)		S	
400 lbs. (181 kg) Carton/Box TIG (36")	2 Cartons/Pallet	800 lbs. (363 kg)		S	
250 lbs. (113 kg) Reel	3 Reels/Pallet	750 lbs. (340 kg)	A		
500 lbs. (227 kg) Reel	3 Reels/Pallet	1,500 lbs. (680 kg)	A		
250 lbs. (113 kg) Gen Pak	2 Paks/Pallet	500 lbs. (227 kg)	A		
500 lbs. (227 kg) Gen Pak	2 Paks/Pallet	1,000 lbs. (454 kg)	A		
500 lbs. (227 kg) Pay-off Pak	4 Paks/Pallets	2,000 lbs. (907 kg)			A

S - Standard Packaging (may vary by alloy)

A - Available upon request





CWI GEN⁴ WELDING

CENTRAL WIRE INDUSTRIES



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