

Welding parameters with recommended shielding gas & filler metals



Carbon steel Stainless steel Aluminum

GMAW	RECOMMENDED FILLER METALS	RECOMMENDED GASES	RECOMMENDED FILLER METALS	RECOMMENDED GASES	RECOMMENDED FILLER METALS	RECOMMENDED GASES
	LA S-3 • LA S-6	BLUESHIELD 6, 7, 8, 21	640-308L • 640-316L • 640-309L	BLUESHIELD 9 • ARCAL 12	CRYSTAL™ 4043 • CRYSTAL 5356	---
	DIAMETER		AMPERAGE (A)	WIRE FEED SPEED		VOLTAGE (V)
	mm in		(cm/min)	(ipm)		
	0.6 0.23	45-90	381-965	150-380	14-16	
	0.8 0.30	60-140	381-889	150-350	14-16	
	1.2 .045	190-330	610-1 525	240-600	27-33	
	0.9 .035	180-320	890-1 905	350-750	29-36	

MCAW	RECOMMENDED FILLER METALS	RECOMMENDED GASES			
	LA C-6 • LA C-6 LF • LA C-6 CT • LA 80 C-W • LA 80 C-Ni2 • LA 110 C-MG	BLUESHIELD 6, 8 ARCAL 14			
DIAMETER		AMPERAGE (A)	WIRE FEED SPEED		VOLTAGE (V)
	mm in		(cm/min)	(ipm)	
	1.6 1/16	240-520	445-1 270	175-500	26-37
	1.32 .052	220-460	560-1 575	220-620	25-35
	1.2 .045	190-330	610-1 525	240-600	27-33
	0.9 .035	180-320	890-1 905	350-750	29-36

FGAW	RECOMMENDED FILLER METALS	RECOMMENDED GASES	RECOMMENDED FILLER METALS	RECOMMENDED GASES
	LA T-9 PLUS • LA T-91 LF • LA T-91-T-12M • LA T-91 C60 Ni1 • LA 111 T1-K3M • LA T-11	BLUESHIELD 7, 8 ARCAL 211	650-308L • 654-316L • 652-309L • 650P-308L • 654P-316L • 652P-309L	---
FLAT POSITION				
DIAMETER		OPERATING RANGE		
	mm in	Amperage (A)	Voltage (V)	
	3.2 1/8	375-725	26-37	
	2.4 3/32	300-550	26-34	
	2.0 5/64	280-430	26-33	
	1.6 1/16	150-400	22-34	
	1.32 .052	140-330	19-32	
	1.2 .045	130-300	21-32	
	0.9 .035	125-290	21-30	
LA T-11	DIRECT CURRENT ELECTRODE NEGATIVE (DCEN)			
	DIAMETER	OPERATING RANGE	ELECTRICAL STICKOUT	
	mm in	Amperage (A) Voltage (V)	mm in	
	0.8 0.030	40-180 14-18	9.5 to 12.7 mm (3/8" to 1/2")	
	0.9 0.035	60-220 14-19	9.5 to 12.7 mm (3/8" to 1/2")	
	1.2 0.045	80-240 15-20	9.5 to 19 mm (3/8" to 3/4")	



Air Liquide Canada was the first company to produce flux-cored wire in North America. Since then, our filler metals have become renowned in Canada the same way our LA 7018 series of welding electrodes have become the Canadian standard in shielded metal arc welding.

We're proud to offer our customers products that are manufactured in Canada and adapted to their needs.

GTAW	RECOMMENDED GASES	RECOMMENDED GASES	RECOMMENDED GASES	RECOMMENDED GASES
	HI-TENSILE • ER 70 S-2	BLUESHIELD 1, 2, 3 • Argon	630-308L • 630-316L • 630-309L	---
METAL THICKNESS	JOINT TYPE	AMPERAGE (A)	TUNGSTEN ELECTRODE DIAMETER	FILLER ROD DIAMETER
1.6 mm (1/16")	Butt Lap Corner Fillet	60-70 70-90 70-90	1.6 mm 1/16"	1.6 mm 1/16"
3.2 mm (1/8")	Butt Lap Corner Fillet	80-100 90-115 80-100 90-115	1.6 mm - 2.4 mm 1/16" - 3/32"	2.4 mm 3/32"
4.8 mm (3/16")	Butt Lap Corner Fillet	115-135 140-165 115-135 140-170	2.4 mm 3/32"	3.2 mm 1/8"
6.4 mm (1/4")	Butt Lap Corner Fillet	160-175 170-200 160-175 175-210	3.2 mm 1/8"	4.0 mm 5/32"

METAL THICKNESS	JOINT TYPE	AMPERAGE (A)	TUNGSTEN ELECTRODE DIAMETER	FILLER ROD DIAMETER
1.6 mm (1/16")	Butt Lap Corner Fillet	60-80 70-90 70-90	1.6 mm 1/16"	1.6 mm 1/16"
3.2 mm (1/8")	Butt Lap Corner Fillet	125-145 140-160 125-145 140-160	2.4 mm 3/32"	2.4 mm, 3.2 mm 3/32", 1/8" 2.4 mm, 1.6 mm 3/32", 1/16"
4.8 mm (3/16")	Butt Lap Corner Fillet	190-200 210-240 190-200 210-240	3.2 mm 1/8"	3.2 mm 1/8"
6.4 mm (1/4")	Butt Lap Corner Fillet	260-300 290-340 290-320 280-320	5.0 mm 3/16"	2.4 mm or 5.0 mm 3/32" or 3/16"

SMAW	RECOMMENDED FILLER METALS	RECOMMENDED GASES	RECOMMENDED FILLER METALS	RECOMMENDED GASES
	LA EXCELARC™ 18 • LA 7018 • LA ULTRA 11 • LA 6013 • LA 7014 • LA 7024	---	620-308L • 622-316L • 624-309L • 620P-308L • 622P-316L • 624P-309L	---
DIAMETER		AMPERAGE (A)		
	mm in			
	2.5 3/32	50-135		
	3.2 1/8	80-180		
	4.0 5/32	110-240		
	5.0 3/16	130-300		

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SAW	RECOMMENDED GASES	RECOMMENDED GASES	RECOMMENDED GASES	RECOMMENDED GASES	
	LA 12K • LA 59 • OP 176 • OP 139	---	OP 33 • OP 76	---	
DIAMETER		AMPERAGE (A)	VOLTAGE (V)	ELECTRICAL STICKOUT	
	mm in			mm	in
	2.0 5/64	200-500	25-30	19-32	3/4-1 1/4
	2.5 3/32	250-600	25-30	19-32	3/4-1 1/4
	3.2 1/8	300-800	26-32	19-32	3/4-1 1/4
	4.0 5/32	400-1000	26-34	25-38	1-1 1/2
	5.0 3/16	500-1200	28-36	25-38	1-1 1/2

