

Stainless Steel Welding Selection Chart

AWS Class	Application	Diameter		Product code	Packaging
		mm	in.		
E 308	For welding similar steels such as AISI 301, 302, 303, 308 as well as ferritic types (13% Cr).	2.5	3/32	6007 2409	4.5-18 kg
		3.2	1/8	6007 3209	4.5-18 kg
		4	5/32	6007 4009	4.5-18 kg
		5	3/16	6007 5009	4.5-18 kg
E 308 L	For welding extra low carbon grades similar to Type 308 with improved resistance against intergranular corrosion	2.5	3/32	6008 2409	4.5-18 kg
		3.2	1/8	6008 3209	4.5-18 kg
		4	5/32	6008 4009	4.5-18 kg
		5	3/16	6008 5009	4.5-18 kg
E 309	For welding heat-resistant steels of Type 309 as well as ferritic Cr-Si-Al types. Also for dissimilar materials providing alloy content is high enough for a ductile weld deposit	2.5	3/32	6011 2409	4.5-18 kg
		3.2	1/8	6011 3209	4.5-18 kg
		4	5/32	6011 4009	4.5-18 kg
		5	3/16	6011 5009	4.5-18 kg
E 309 L	Extra low carbon type similar to 309 for buffer layers when cladding as well as for joining of dissimilar steels. Improved resistance against hot-cracking.	2.5	3/32	6012 2409	4.5-18 kg
		3.2	1/8	6012 3209	4.5-18 kg
		4	5/32	6012 4009	4.5-18 kg
		5	3/16	6012 5009	4.5-18 kg
E 310	For welding Type 310 as well as straight Cr steels to dissimilar metals. Scale resistance at extreme temperatures C-196° to 1200° (F-320° to 2200°).	2.5	3/32	6016 2409	4.5-18 kg
		3.2	1/8	6016 3209	4.5-18 kg
		4	5/32	6016 4009	4.5-18 kg
		5	3/16	6016 5009	4.5-18 kg
E 312	For joining dissimilar steels with higher tensile values. Crack resistant, also in problem steels. Wear-resistant buildups and buffer layers for hard-facing. Welds are unaffected at service temperature of up to C 350° (F 660°)	2.5	3/32	6020 2409	4.5-18 kg
		3.2	1/8	6020 3209	4.5-18 kg
		4	5/32	6020 4009	4.5-18 kg
		5	3/16	6020 5009	4.5-18 kg
E 316	For welding of Type 316 steel. Mo content increases resistance against corrosion at severe chemical attack in chemical, pulp and paper industry. Service temperature of up to C 300° (F 570°).	2.5	3/32	6028 2409	4.5-18 kg
		3.2	1/8	6028 3209	4.5-18 kg
		4	5/32	6028 4009	4.5-18 kg
		5	3/16	6028 5009	4.5-18 kg
E 316 L	Extra low carbon type similar to 316 with additionally increased resistance against intergranular corrosion. Service temperature up to C 350° (F 660°). Smooth beads and easy slag removal	2.5	3/32	6029 2409	4.5-18 kg
		3.2	1/8	6029 3209	4.5-18 kg
		4	5/32	6029 4009	4.5-18 kg
		5	3/16	6029 5009	4.5-18 kg

Listed below are the average analysis of **BONARC STAINLESS STEEL WELDING ELECTRODES** to ASME Section IIC SFA 5.4, AWS A 5.4-78 and CSA W 48.2-77.

GRADE	C	Si	Mn	Cr	Ni	Mo	Cu	Cb+Ta	V	Ti
AUSTENITIC										
E307-16	0.11	0.9	4.0	19.5	9.5	0.7	0.5			
E308-16	0.06	0.9	1.10	20.0	9.5	0.1	0.1			
E308L-16	0.03	0.9	1.10	20.5	10.5	0.1	0.1	0.05	< 0.1	< 0.005
E309-16	0.12	0.9	2.0	23.5	12.5	0.1	0.1			
E309L-16	0.03	0.9	1.0	23.5	12.5	0.1	0.1	0.05	< 0.1	< 0.005
E309MoL-16	0.03	0.9	1.0	23.0	12.0	3.0	0.1	0.05		
E309Cb-16	0.09	0.8	1.7	23.0	13.0	0.1	0.1	0.9		
E310-16	0.15	0.7	2.5	27.5	21.0	0.1	0.1			
E310Cb-16	0.12	0.7	2.4	28.0	22.0	0.1	0.1	0.8		
E310Mo-16	0.1	0.7	2.4	26.5	21.0	3.0	0.1			
E312-16	0.1	0.8	1.0	29.0	9.0	0.1	0.1			
E316-16	0.05	0.9	1.0	19.5	11.5	2.3	0.1			
E316L-16	0.03	0.9	1.0	19.5	12.0	2.3	0.1	0.04	< 0.1	< 0.005
E317L-16	0.03	0.9	1.1	19.6	12.0	3.5	0.1			
E318-16	0.03	0.9	1.5	18.5	12.5	2.3	0.1	0.4		
E320-15	0.04	0.4	2.2	21.0	35.0	2.5	3.0	0.5		
E330-16	0.12	0.4	2.3	16.0	36.0	0.6	0.1			
E347-16	0.03	0.7	1.0	20.5	10.5	0.1	0.1	0.4	< 0.1	< 0.005
MARTENSITIC										
E410-16	0.08	0.7	0.6	12.5	0.3	0.5	0.5			
FERRITIC										
E430-15	0.07	0.5	0.7	17.0	0.6	0.5	0.5			
CHROMIUM/MOLYBDENUM										
E502-15	0.05	0.6	0.8	5.0	0.4	0.5	0.5			
E502-16	0.07	0.4	0.5	5.7	0.3	0.6	0.5			
E505-15	0.05	0.6	0.8	9.0	0.4	1.0	0.5			

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