

Stainless steel electrode

Classification

ASW A5.4 : E308LMo-16
EN 1600 : E 20 10 3 R 32

Temperature range

pressurized parts : -20 ... +350°C
scaling resistance : n.a.

General description

A rutile-basic all position electrode for welding dissimilar joints
The general purpose electrode for repair welding
Suitable for hobby and professional applications
Easy slag release and smooth bead appearance
Also applicable for joining steels difficult to weld
Weldable on AC and DC+ polarity

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3Gup PE/4G PF/5Gup

Current type

AC / DC +

Approvals

BV	DNV	GL	TÜV
UP	308Mo	4431	+

Chemical composition (w%), typical, all weld metal

C	Mn	Si	Cr	Ni	Mo	FN
0.025	0.8	1.0	20.0	9.5	2.3	20

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
					+20°C	-20°C
Required: AWS A5.4		not required	min. 520	min. 35	not required	
EN 1600		min. 400	min. 620	min. 20	not required	
Typical values	AW	500	720	30	70	60

Packaging and available sizes

	Diameter (mm)	2.0	2.5	3.2	4.0	5.0
	Length (mm)	300	350	350	350	350
Unit: Box	Pieces / unit	225	135	150	100	65
	Net weight/unit (kg)	2.5	2.7	4.9	5.0	5.0
Unit: Linc Pack	Pieces / unit		50	31		
	Net weight/unit (kg)		1.0	1.0		

Identification

Imprint: 308LMo-16 / NICHROMA

Tip Color: Mauve

Nichroma: rev. EN 21

Materials to be welded

Steel grades	EN 10088-1/-2	EN 102 13-4	W.Nr.	ASTM/ACI A240/A312/A351	UNS
First layer in CrNiMo claddings					
	X2 CrNiMo 17-12-2		1.4404	(TP)316L CF-3M	S31603 J92800
	X2 CrNiMo 18-14-3		1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2		1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3		1.4429		
	X4 CrNiMo 17-12-2		1.4401	(TP)316	S31600
	X4 CrNiMo 17-13-3		1.4436		
	X6 CrNiMoTi 17-12-2		1.4571	316Ti	S31635
	X10 CrNiMoTi 17-3		1.4573	316Ti	S31635
	X6 CrNiMoNb 17-12-2		1.4580	316Cb	S31640
	GX5 CrNiMo 19-11		1.4408		

Welding dissimilar metals: mild steel and low alloyed steel to stainless CrNi and CrNiMo-steel

Build-up welding on mild and low alloyed steel

Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. (s)*	Energy E(kJ)	Dep.rate - H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.0 x 300	30 - 50	DC+	44	46	0.57	11.0	144	1.59
2.5 x 350	40 - 75	DC+	54	99	0.86	19.8	78	1.54
3.2 x 350	60 - 110	DC+	52	132	1.5	33.4	46	1.54
4.0 x 350	80 - 150	DC+	62	234	1.9	49.6	30	1.49
5.0 x 350	140 - 220	DC+	66	365	2.8	78.4	19	1.52

* stub end 35 mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.0		45A	45A	40A	40A	40A
2.5	70A	70A	70A	60A	60A	60A
3.2	100A	100A	100A	70A	70A	70A
4.0	140A	140A	140A	80A		
5.0	180A	180A	180A			