Nichroma

EMR SAHARA®

CLASSIFICATION

AWS A5.4	E308LMo-16	**A-Nr**	8	**Mat-Nr**	1.4431
ISO 3581-A	E 20 10 3 R 3 2	**F-Nr**	5		
		9606 FM	5		

TEMPERATURE RANGE

Pressurized parts : -20...+300°C
Oxidation 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/3Gu** **PE/4G** **PH/5Gu**

CURRENT TYPE

AC/DC +

APPROVALS

BV	DNV	GL	TÜV	DB
UP	308Mo	4431	+	+

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr	Ni	Mo	FN (acc.WRC 1992)
0.025	0.8	1.0	20.0	9.5	2.3	20

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) +20°C	Impact ISO-V(J) -20°C
Required: AWS A5.4		not required	min. 520	min. 35	not required	
ISO 3581-A		min. 400	min. 620	min. 20	not required	
Typical values	AW	500	720	30	70	60

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	350	350	350
Carton + PE foil	**Pieces / unit**	135	150	100
	Net weight/unit (kg)	2.7	4.9	5.0

Identification Imprint: 308LMo-16 / NICHROMA Tip Color: purple

Nichroma: rev. C-EN27-01/02/16

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EXAMPLES OF MATERIALS TO BE WELDED

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
First layer in CrNiMo claddings					
	X2CrNiMo17-12-2		1.4404	(TP)316L	S31603
				CF-3M	J92800
	X2CrNiMo18-14-3		1.4435	(TP)316L	S31603
	X2CrNiMoN17-11-2		1.4406	(TP)316LN	S31653
	X2CrNiMoN17-13-3		1.4429		
	X4CrNiMo17-12-2		1.4401	(TP)316	S31600
	X4CrNiMo17-13-3		1.4436		
	X6CrNiMoTi17-12-2		1.4571	316Ti	S31635
	X10CrNiMoTi17-3		1.4573	316Ti	S31635
	X6CrNiMoNb17-12-2		1.4580	316Cb	S31640
		GX5CrNiMo19-11	1.4408		

Welding dissimilar metals: mild steel and low alloy steel to stainless CrNi and CrNiMo-steel
Build-up welding on mild and low alloy steel

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (S)*	Energy - per electrode at max. current - E(kJ)	Dep. rate - per electrode at max. current - H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
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 450	140 - 220	DC+	66	365	2.8	78.4	19	1.52

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PH/5Gup
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			