



Product Data Sheet

E 'Manual metal-arc welding'

OK 61.35 Cryo

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN007102	Cancelling EN005957	Reg date 2016-02-23	Page 1 (2)
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REASON FOR ISSUE

FN and N added under Chemical Composition. Mechanical data revised. Hardness data provided under Other Data.

GENERAL

A basic stainless stick electrode of the 308L-type especially designed for cryogenic applications. Provides controlled low ferrite content to ensure lateral expansion of min. 0.38 mm at -196°C.

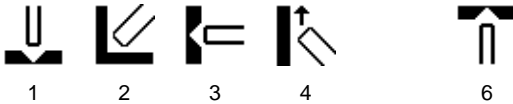
Polarity: DC+

Alloy Type: Austenitic CrNi

Coating Type: Basic

Ferrite Content: FN 2-4

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 19 9 L B 2 2
SFA/AWS A5.4 E308L-15
Werkstoffnummer 1.4316

APPROVALS

VdTÜV 10721

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.04	
Si	0.20	0.70	
Mn	1.30	2.00	
P		0.020	
S		0.010	
Cr	18.0	20.0	
Ni	9.0	11.0	
Mo		0.3	
Cu		0.3	
N		0.08	
Ferrite FN	2	4	3



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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO		AWS	
	Min	Typ	Min	Typ
Rp0.2 (MPa)	320		320	425
Rm (MPa)	520		520	580
A4 (%)			35	45
A5 (%)	32			
Z (%)			50	60
Charpy V at 20°C (J)				100
Charpy V at -196°C (J)	32	50	32	50

Comments:

Lateral expansion min. 0.38mm. (0.015 inch).

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 300	55	85	1.7	100	0.61	92	0.9	37	22	1,2,3,4,6
3.2 x 350	80	120	3.3	100	0.61	50	1.3	54	25	1,2,3,4,6
4.0 x 350	80	180	4.9	100	0.61	33	1.9	58	27	1,2,3,4,6
5.0 x 350	160	210	7.8	98	0.58	22	2.3	70	26	1,2,3

- W** = Weight (kg / 100 electrodes)
η = Efficiency (g weld metal x 100 / g core wire)
N = Effective value (kg weld metal / kg electrodes)
B = Changes (number of electrodes / kg weld metal)
H = Deposit rate at 90% of max current (kg weld metal / hour arc time)
T = Fusion time at 90% of max current (s / electrode)
U = Arc voltage (V)

OTHER DATA

Hardness data:

As welded condition, V-joint, matching base material: 177 - 197 HV10

Redrying 200°C, 2h