



Signed by Claes Gillenius	Approved by Tapio Huhtala/Barbro Karlström	Reg no EN002092	Cancelling EN001076	Reg date 2004-06-07	Page 1 (2)
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## REASON FOR ISSUE

Revised approvals.

## GENERAL

Extra low carbon stainless steel electrode for welding steels of the 18Cr 12Ni 2.8Mo-type.

Also suitable for welding of stabilized stainless steels of similar composition, except when the full creep resistance of the base metal is to be met.

**Min AC OCV:** 50  
**Polarity:** DC+, AC

**Alloy Type:** Austenitic CrNiMo  
**Coating Type:** Acid-Rutile  
**Ferrite Content:** FN 3-10

## WELDING POSITIONS



## CLASSIFICATIONS Electrode

EN 1600	E 19 12 3 L R 1 2
SFA/AWS A5.4	E316L-17
ISO 3581	E 19.12.3.L R
CSA W48	E316L-17
Werkstoffnummer	1.4430

## APPROVALS

Ü	30.039
ABS	E316L-17
BV	U.P. for chemical applications
CL	EN 1600
CWB	CSA W48
DB	30.039.06
DNV	316L
GL	4571
LR	316L
Sepros	UNA 409820
SS	EN 1600
UDT	EN 1600
VdTÜV	00262

## CHEMICAL COMPOSITION

Compound	All Weld Metal (%)	
	Min	Max
C		0.030
Si		0.90
Mn	0.5	1.2
P		0.025
S		0.020
Cr	17.0	19.0
Ni	11.0	13.0
Mo	2.5	3.0
Cu		0.2



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## MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal		
	ISO		AWS
	Min	Typ	Min
Rp0.2 (MPa)	350	460	350
Rm (MPa)	520	570	520
A4-A5 (%)	27	40	30
Z (%)		60	
Charpy V at 20°C (J)	47	60	
Charpy V at -20°C (J)	34	55	
Charpy V at -125°C (J)	32		
	Comments: Elongation = A5		Comments: Elongation = A4

### Comments:

Interpass temperature maximum 150 °C .  
Hardness weld metal 180 - 220 HV.

## ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	$\eta$	N	B	H	T	U
	Min	Max							
1.6 x 300	35	50	0.7	95	0.56	250	0.42	37	29
2.0 x 300	45	65	1.1	104	0.60	147	0.57	39	29
2.5 x 300	60	90	1.9	100	0.55	96	0.9	45	29
2.5 x 350	60	90	2.2	105	0.56	83.0	1.10	41	30
3.2 x 350	80	125	3.5	100	0.55	52	1.4	57	30
4.0 x 350	120	170	5.3	100	0.56	34	2.0	57	32
5.0 x 350	150	240	8.3	100	0.56	21	3.0	63	32

- W** = Weight (kg / 100 electrodes)
- $\eta$**  = 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

Redrying: 350 °C, 2h.