



# Product Data Sheet

G 'Gas-shielded metal-arc welding'

# OK Autrod 316LSi

Prepared by Mats Linde	Qualified by Tero Borg	Approved by Jay A Coubrough	Reg no EN007218	Cancelling EN006307	Reg date 2016-05-05	Page 1 (2)
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## REASON FOR ISSUE

Adjustment of N for PDS, PR and PS to match

## GENERAL

A continuous solid corrosion resisting chromium-nickel-molybdenum wire for welding of austenitic stainless alloys of 18% Cr - 8% Ni and 18% Cr - 10% Ni - 3% Mo types.

OK Autrod 316LSi has a good general corrosion resistance, in particularly the alloy has very good resistance against corrosion in acid and chlorinated environments. The alloy has a low carbon content which makes it particularly recommended where there is a risk of intergranular corrosion. The higher silicon content improves the welding properties, such as wetting. The alloy is widely used in the chemical and food processing industries as well as in ship building and various types of architectural structures.

**Shielding Gas:** M12, M13 (EN ISO 14175)

**Alloy Type:** Austenitic (with approx. 8 % ferrite) 19% Cr - 12% Ni - 3% Mo - Low C - High Si

## CLASSIFICATIONS Wire Electrode

EN ISO 14343-A G 19 12 3 L Si  
SFA/AWS A5.9 ER316LSi  
Werkstoffnummer ~1.4430

## APPROVALS

CE EN 13479  
CWB ER316LSi  
DB 43.039.05  
DNV NV 316L (M13)  
VdTÜV 04268

## APPROVALS (SPECIFIC)

NAKS/HAKC 1.0MM-1.2MM

## APPROVAL COMMENT

Valid for lot numbers starting with PV

## CHEMICAL COMPOSITION

	All Weld Metal (%)	Wire/Strip (%)	
	Nom	Min	Max
C	0.02		0.030
Si	0.8	0.65	1.00
Mn	1.8	1.5	2.3
P	0.015		0.030
S	0.015	0.005	0.020
Cr	18.5	18.0	20.0
Ni	12	11.0	13.0
Mo	2.7	2.5	3.0
Cu	0.1		0.5
N			0.110
Ferrite FN			
Others tot			0.50



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## MECHANICAL PROPERTIES OF WELD METAL

### All Weld Metal

Properties	As welded		Tested at 350°C.	
	Min	Typ	As welded	
		Typ	Typ	
Rp0.2 (MPa)	320	400	340	
Rm (MPa)	510	560	440	
A4-A5 (%)			26	
A5 (%)	25	37		
Charpy V at 20°C (J)		120		
Charpy V at -60°C (J)		95		
Charpy V at -110°C (J)		70		
Charpy V at -196°C (J)		45		

## ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	$\eta$	H		Feed			U
	Min	Max			Nom	Nom	Min	Max	Min	
$\emptyset$										
0.6										
0.8	55	160	12		1.0	4.1	4.0	17.0	12	24
0.9	65	220	13		1.1	5.4	3.5	18.0	15	28
1.0	80	240	15		1.5	6.0	4.0	16.0	15	28
1.14										
1.2	100	300	18		1.6	7.5	3.0	14.0	15	29
1.6	230	375	20		5.2	8.6	5.5	9.0	23	31

**W** = Gas consumption (l / min)

$\eta$  = Recovery, g weld metal / 100g wire (%)

**H** = Deposit rate (kg weld metal / hour arc time)

**Feed** = Feeding rate (m/min)

**U** = Arc voltage (V)