Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK Autrod 308L

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Mats Linde	P-O Oskarsson	Jay A Coubrough	EN007476	EN004988	2017-02-22	1 (2)

REASON FOR ISSUE

Updated to include low ferrite data

GENERAL

A continuous solid corrosion resisting chromium-nickel wire. The alloy has a low carbon content which makes this alloy particularly recommended were there is a risc of intergranular corrosion.

The alloy is widely used in the chemical and food processing industries as well as for pipes, tubes and boilers.

For joining of stainless steels of 18% Cr - 8% Ni-type and Nb-stabilized steels of the same type if the service temperature will not exceed 350°C.

Shielding Gas: M12, M13 (EN ISO 14175)

Alloy Type: Austenitic (with approx. 8 % ferrite) 19% Cr - 9% Ni - Low C

CLASSIFICATIONS Wire Electrode

EN ISO 14343-A	G 19 9 L
SFA/AWS A5.9	ER308L
Werkstoffnummer	~1.4316

APPROVALS

ABS	ER308/308L

APPROVAL COMMENT

Valid for lot numbers starting with PV

CHEMICAL COMPOSITION

	All Weld Metal (%)	Wire/Strip (%)	
	Nom	**Min**	**Max**
C	0.020		0.030
Si	0.4	0.30	0.65
Mn	1.6	1.5	2.0
P	0.015		0.030
S	0.015	0.005	0.020
Cr	20.0	19.5	21.0
Ni	10.0	9.0	11.0
Mo	0.05		0.50
Cu	0.05		0.50
N			0.080
FN WRC-92		4	12
Others tot			0.50

Comments:
Lots with prefix FP: FN 4-8
Lots with prefix PV: FN 5-12

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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

	Lot prefix: PV		Lot prefix: FP	
	As welded		As welded	
Properties	**Min**	**Typ**	**Min**	**Typ**
Rp0.2 (MPa)	320	400	320	390
Rm (MPa)	510	560	510	550
A4-A5 (%)	30	36	30	36
Charpy V at 20°C (J)		95		105
Charpy V at -60°C (J)		70		75
Charpy V at -196°C (J)		35		40
	Comments:		Comments: Avg. Lateral Expansion at -196°C: Min 0.38 mm, typical >0.45	

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed		U	
Ø	Min	Max	Nom	Nom	Min	Max	Min	Max	Min	Max
0.8	55	160	12		0.9	4.1	4.0	17.0	15	24
0.9	55	160	12		0.9	4.1	4.0	17.0	15	24
1.0	80	240	15		1.5	6.0	4.0	16.0	15	28
1.14	80	240	15		1.5	6.0	4.0	16.0	15	28
1.2	100	300	18		1.6	7.5	3.0	14.0	14	28.5

W = Gas consumption (l / min)

η = Recovery, g weld metal / 100g wire (%)

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

Feed = Feeding rate (m/min)

U = Arc voltage (V)