



Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK Autrod 2209

Prepared by Jay A Coubrough	Qualified by Tero Borg	Approved by Jay A Coubrough	Reg no EN006936	Cancelling EN006761	Reg date 2015-11-27	Page 1 (2)
--------------------------------	---------------------------	--------------------------------	--------------------	------------------------	------------------------	---------------

REASON FOR ISSUE

Adding DB Approvals

GENERAL

A continuous solid corrosion resisting Duplex wire for welding of austenitic-ferritic stainless alloys of 22% Cr, 5% Ni, 3% Mo types.

OK Autrod 2209 has a high general corrosion resistance. In media containing chloride and hydrogen sulphide the alloy has a high resistance to intergranular, pitting and especially to stress corrosion. The alloy is used in a variety of applications across all industrial segments.

Shielding Gas: M12, M13 (EN ISO 14175)

Alloy Type: Austenitic-ferritic (22.5 % Cr - 8 % Ni - 3 % Mo - Low C)

CLASSIFICATIONS Wire Electrode

EN ISO 14343-A G 22 9 3 N L
SFA/AWS A5.9 ER2209

APPROVALS

CE EN 13479
DB 43.039.18
DNV For duplex stainless steels* (M13)
GL 4462S* (M13)
VdTÜV 13039*

APPROVALS (SPECIFIC)

VdTÜV 05387

Valid for lot numbers starting with IT

APPROVAL COMMENT

*Valid for lot numbers starting with PV

CHEMICAL COMPOSITION

	All Weld Metal (%)		Wire/Strip (%)	
	Nom	Min	Max	
C	0.01		0.025	
Si	0.6	0.30	0.70	
Mn	1.6	1.20	1.85	
P	0.01		0.020	
S	0.01		0.020	
Cr	23	21.5	23.5	
Ni	9	8.0	9.0	
Mo	3	3.00	3.40	
Co			0.25	
Nb			0.10	
Cu			0.30	
Al			0.020	
N	0.1	0.14	0.190	
Others tot			0.50	



Product Data Sheet

G 'Gas-shielded metal-arc welding'

OK Autrod 2209

Prepared by Jay A Coubrough	Qualified by Tero Borg	Approved by Jay A Coubrough	Reg no EN006936	Cancelling EN006761	Reg date 2015-11-27	Page 2 (2)
--------------------------------	---------------------------	--------------------------------	--------------------	------------------------	------------------------	---------------

MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal	
	AWS 98 Ar/2 O ₂ (M13) As welded	EN 98 Ar/2 O ₂ (M13) As welded
	Typ	Min Typ
Rp0.2 (MPa)	590	480 610
Rm (MPa)	785	680 785
A4 (%)	31	
A5 (%)		25 32
Charpy V at -30°C (J)	105	95
Charpy V at -46°C (J)	90	90
	Comments: Typical FN: 45	Comments:

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed			U	
	Min	Max			Nom	Min	Max	Min	Max	Min	Max
\emptyset			Nom	Nom	Min	Max	Min	Max	Min	Max	Max
0.8	50	140	12		0,8	2,7	3,4	11	16	22	
1.0	80	190	15		1,1	3,1	2,9	8,4	16	24	
1.2	180	280	18		2,6	4,5	4,9	8,5	20	28	
1.6	230	350	22		3	5,2	3,2	5,5	24	28	

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)

OTHER DATA

Welding should proceed with neither too high or too low heat input (general recommendation 0.5-2.5 kJ/mm).