



Cromamig 312

GMAW - MIG MAG
Stainless Steel

Date: 2008-01-22
Revision: 9

Description:

Cromamig 312 deposits a 29% Cr / 9% Ni austenitic/ferritic stainless steel weld metal with a ferrite content of about FN 40. The weld metal exhibits excellent tolerance to dilution from dissimilar and difficult-to-weld base materials without hot cracking, together with high strength and very good heat and oxidation resistance.

APPLICATIONS:

- Difficult-to-weld steels e.g. high carbon hardenable tool, die and spring steels, 13% Mn steels, free-cutting steels, high temperature steels.
- Dissimilar joints between stainless and high carbon steels.
- Surfacing of metal-to-metal wear areas, hot working tools, furnace components.
- Buffer layers prior to hard facing with high chromium carbide deposits.

Welding current:

DC+

Wire composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min		0,30	1,0			28,0	8,0
Typical	0,10	0,50	1,9	0,020	0,010	30,5	9,2
Max	0,15	0,65	2,5	0,030	0,020	32,0	12,0

	Mo	Cu
Min		
Typical	0,10	0,10
Max	0,30	0,30

Shielding gas:

Acc. to EN 439:

M12, Ar, 2% CO₂, 16-21 l/min

M13, Ar + 1-3% O₂, 16-21 l/min

Ferrite content:

FN 40

Corrosion resistance

Good resistance to sulphurous gases at high temperature. Good resistance to wet corrosion up to approximately 300°C.

Scaling temperature:

Approx. 1100°C in air.

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min							
Typical	0,10	0,5	1,8	0,02	0,01	30,0	9,0
Max							

	Mo
Min	
Typical	0,10
Max	

Mechanical properties

	<u>Specified</u>	<u>Typical</u>
Yield strength, Rp0.2%:	≥ 450 MPa	600 MPa
Tensile Strength, Rm:	≥ 660 MPa	750 MPa
Elongation, A5	≥ 22%	25%
Impact energy, CV:		20°C • 50 J

Classification:

EN ISO 14343

AWS A5.9

G 29 9

ER312

Approvals:

Product data

Diam.mm	Product code	Dip Current A	Dip Voltage V	Spray Current A	Spray Voltage V
1,0	9808-2010	75-140	18-21	170-200	26-28
1,2	9808-2012	130-160	18-21	175-250	26-28