



Arc Welding Consumables

MMA WELDING

COATED ELECTRODES

MMA rutile coating

■ SPEEDARC - RAPIDARC - EASYARC - UNIVARC - TUBARC	pages 6-2 to 6-6
---	------------------

MMA basic coating

■ TENSARC - RESISTARC	pages 6-7 & 6-8
------------------------------	-----------------

MMA electrodes for stainless steel welding

■ INOXARC 316 L - INOXARC 308 L	pages 6-9 & 6-10
--	------------------

MMA electrodes for repair

■ INOXARC R 312	page 6-11
------------------------	-----------

MMA electrodes for hardfacing

■ MANGANARC 600	page 6-12
------------------------	-----------

MMA electrodes for welding cast-iron

■ CASTARC	page 6-12
------------------	-----------

MIG/MAG WELDING

SOLID WIRES

For welding mild and structural steels

■ STEELMIG G2	page 6-14
■ STEELMIG G3	page 6-15
■ GALVAMIG	page 6-16
■ TENOMIG	page 6-17

For welding stainless steels

■ WL 308 L Si / WL 316 L Si / INOXMIG 308 L	page 6-18
--	-----------

For welding aluminium

■ WL ALMG 5	page 6-19
--------------------	-----------

For welding copper aluminium

■ COPPERMIG	page 6-19
--------------------	-----------

For hard facing

■ HARDMIG 600	page 6-20
----------------------	-----------

TIG WELDING

FILLER METAL

Rods for welding mild and structural steels

■ STEELTIG G2 / G3	page 6-21
---------------------------	-----------

Rods for welding stainless steels

■ WL ROD 308L / 316L	page 6-22
-----------------------------	-----------

Rods for welding aluminium alloys

■ WL ROD ALMG 5	page 6-23
------------------------	-----------

SPEEDARC

General characteristics:

General purpose and very versatile electrode.
It can be used for all positional welding,
except vertically-down.
Excellent arc-striking even on slightly rusted,
or poorly prepared parts.

Main applications:

- Maintenance and general work.
- Small running repairs.

Standards

EN 499: E 38 0 R 12

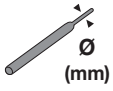
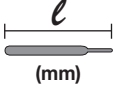
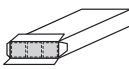
AWS A 5.1: E 6013



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1579-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
			0 °C
490 - 600	> 430	> 24	> 47

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
1.6	250	6.0	250	1500	W 000 289 098
2.0	300	11.8	323	969	W 000 287 021
2.5	300	16.0	237	711	W 000 287 023
2.5	350	19.6	230	690	W 000 287 024
3.2	350	31.9	141	423	W 000 287 025
3.2	450	41.7	139	417	W 000 287 026
4.0	450	64.1	92	276	W 000 287 027
5.0	450	96.7	60	180	W 000 287 028

Also available in small pack see page 6-13

Welding positions:



Current conditions:



Type of coating:

- Medium rutile.

RAPIDARC

General characteristics:

General purpose and very versatile electrode.
It can be used for all positional welding.
Excellent arc-striking even on slightly rusted,
or poorly prepared parts.

Main applications:

- Maintenance and general work.
- Small running repairs.

Standards

EN ISO 2560-A: E 38 0 RC 11

AWS A 5.1: E 6013



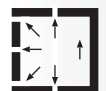
2006-140

MMA ELECTRODES - RUTILE COATING

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN ISO 14799-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
			0 °C
480 - 550	≥ 380	≥ 22	≥ 47

Welding positions:



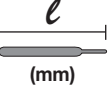
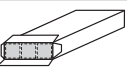
Current conditions:



Type of coating:

- Medium cellulosic.

ORDERING INFORMATION:

 Ø (mm)	 ℓ (mm)	 kg /1000	Quant.		Cat. nr
					
1.6	300	7.3	220	1320	W 000 287 000
2.0	350	11.3	355	1065	W 000 287 001
2.5	350	17.2	250	750	W 000 287 002
3.2	350	27.1	155	465	W 000 287 003
4.0	350	43.0	100	300	W 000 287 004
5.0	450	87.1	70	210	W 000 287 005

Also available in small pack see page 6-13

EASYARC

General characteristics:

General purpose electrode for applications in all positions. Highly versatile electrode with smooth fusion.

Main applications:

- Sheet-metal work.
- Metal fitting steelwork.
- Metal frame work.

Standards

EN ISO 2560-A: E 38 0 RC 11

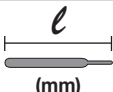
AWS A 5.1: E 6013



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1579-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
			0 °C
510 - 610	> 420	> 22	> 47

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
1.6	300	7.3	220	1320	W 000 287 042
2.0	350	12.7	330	990	W 000 287 043
2.5	350	19.5	215	645	W 000 287 044
3.2	350	31.4	140	420	W 000 287 045
3.2	450	39.3	140	420	W 000 287 046
4.0	450	64.7	85	255	W 000 287 047
5.0	450	104.0	50	150	W 000 287 048

Also available in small pack see page 6-13

Welding positions:



Current conditions:



Type of coating:

- Medium cellulosic.

UNIVARC

General characteristics:

General purpose electrode
with low spatter during welding.
Excellent electrode for work requiring
smooth fusion.

Main applications:

- Sheet-metal work.
- Metal fitting steelwork.
- Metal frame work.

Standards

EN ISO 2560-A: E 38 0 RC 11
AWS A 5.1: E 6013



MMA ELECTRODES - RUTILE COATING

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN ISO 14799-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)	
			- 20 °C	0 °C
480 - 550	≥ 380	≥ 24	≥ 30	≥ 80

Welding positions:



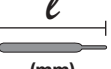
Current conditions:



Type of coating:

- Medium cellulosic.

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
2.0	350	12.9	310	930	W 000 287 011
2.5	350	18.3	230	690	W 000 287 012
3.2	350	27.9	165	495	W 000 287 013
4.0	450	56.4	110	330	W 000 287 014
5.0	450	87.1	70	210	W 000 287 015

Also available in small pack see page 6-13

TUBARC

General characteristics:

General purpose electrode designed for pipe welding applications. This electrode gives a very good bead shape. TUBARC is approved by GDF (Gaz De France). Low level of fume emission.

Main applications:

- Industrial pipe work.
- Heat exchangers.
- Pressure vessel construction.

Standards

EN ISO 2560-A: E 38 0 RC 11

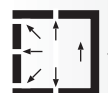
AWS A 5.1: E 6013



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN ISO 14799-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
			- 20 °C
≥ 500	≥ 450	≥ 28	≥ 60

Welding positions:



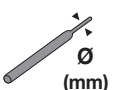
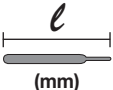
Current conditions:



Type of coating:

- Medium cellulosic.

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
2.0	300	10.0	360	1080	W 000 287 034
2.5	350	18.3	230	690	W 000 287 035
3.2	350	30.7	150	450	W 000 287 036
4.0	350	46.0	100	300	W 000 287 037

Also available in small pack see page 6-13

TENSARC

General characteristics:

MMA electrode for applications requiring demanding mechanical properties. High efficiency basic coated electrodes for low temperature applications. Smooth fusion producing a good bead shape. Excellent arc-striking characteristics for a basic coated electrode.

Main applications:

- Metal fitting steelwork.
- Heavy section boiler making.
- Shipbuilding.
- Transport equipment.



Standards
EN ISO 2560-A: E 42 3 B 32 H 5
AWS A 5.1: E 7018

MMA ELECTRODES - BASIC COATING

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN ISO 14799-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)	
			-30 °C	-50 °C
530 - 640	≥ 420	≥ 22	≥ 140	≥ 47

Welding positions:



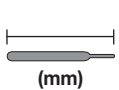
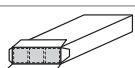
Current conditions:



Type of coating:

- Thick basic with iron powder.

ORDERING INFORMATION:

 Ø (mm)	 (mm)	 kg /1000	Quant.		Cat. nr
					
2.5	350	21.6	185	555	W 000 287 066
3.2	350	33.9	115	345	W 000 287 067
3.2	450	44.3	115	345	W 000 287 068
4.0	350	52.5	80	240	W 000 287 069
4.0	450	66.3	80	240	W 000 287 070
5.0	450	103.6	55	165	W 000 287 071

Also available in small pack see page 6-13

RESISTARC

General characteristics:

Electrodes for applications requiring demanding mechanical properties. High efficiency basic coated electrodes for low temperature applications. Smooth fusion producing a good bead shape. Excellent arc-striking characteristics for a basic coated electrode.

Main applications:

- Metal fitting steelworks.
- Heavy section boiler making.
- Shipbuilding.
- Transport equipment construction.

Standards

EN 499: E 42 4 B 42 H 10

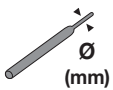
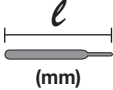
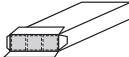
AWS A 5.1: E 7018-1



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1579-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)	
			-20 °C	-40 °C
510 - 640	> 430	> 24	> 80	> 47

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
2.5	350	22.2	180	540	W 000 287 055
3.2	350	35.7	112	336	W 000 287 056
3.2	450	47.0	117	351	W 000 287 057
4.0	350	50.6	79	237	W 000 287 058
4.0	450	67.9	81	243	W 000 287 059
5.0	450	100.0	55	165	W 000 287 060

Also available in small pack see page 6-13

APPROVAL: TÜV

Welding positions:



Current conditions:



Type of coating:

- Thick basic with iron powder.

INOXARC 316 L

General characteristics:

MMA coated electrode for welding stainless steels type 316L. Excellent for applications requiring a good bead shape. Very easy slag removal.

Main applications:

- Food processing.
- Construction of milk industry equipment.
- Construction of pharmaceutical installations.

Standards

EN 1600: E 19 12 3 L R 12

AWS A 5.4: E 316 L - 17



MMA ELECTRODES - BASIC COATING

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN ISO 14799-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
			+ 20 °C
≥ 500	≥ 300	≥ 25	≥ 47

Welding positions:



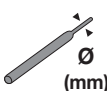
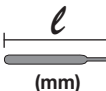
Current conditions:



Type of coating:

- Semi-thick rutile-basic.

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
1.6	300	7.6	210	1260	W 000 287 082
2.0	300	11.3	320	960	W 000 287 083
2.5	300	17.9	190	570	W 000 287 084
3.2	350	35.7	115	345	W 000 287 085
4.0	350	53.3	75	225	W 000 287 086

Also available in small pack see page 6-13

INOXARC 308 L

General characteristics:

MMA coated electrode for welding stainless steel (types 18.8 and 20.10). Highly versatile and easy to use electrode.
Excellent for low carbon steels.

Main applications:

- Stainless steel vessels.
- Stainless steel applications.
- Equipment processing (except food industry).

Standards

EN 1600: E 199 L R 12

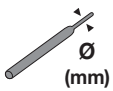
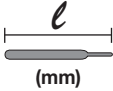
AWS A 5.4: E 308 L - 17



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1579-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
			+20 °C
> 560	> 320	> 30	80

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
2.0	300	11.0	310	930	W 000 287 075
2.5	300	17.4	195	585	W 000 287 076
3.2	350	34.8	115	345	W 000 287 077
4.0	350	53.3	75	225	W 000 287 078

Also available in small pack see page 6-13

Welding positions:



Current conditions:



Type of coating:

- Semi thick rutile with Cr & Ni compensation.

INOXARC R 312

General characteristics:

MMA rutile coated electrode for repair applications.
Excellent for difficult-to-weld steels. For dissimilar steels joining (non or low alloyed steels with stainless steels). Smooth fusion with good bead shape.

Main applications:

- Repair work requiring a buffer layer.
- Joining of dissimilar steels.
- Non or low alloyed steels.
- High tensile strength steels.
- Stainless steels.
- 13% Mn steels.

Standards

EN 1600: E 19 9 L R 12

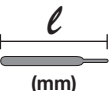
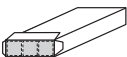
AWS A 5.4: E 308 L - 17



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1579-1):

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)
> 720	> 600	> 30

ORDERING INFORMATION:

 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
					
2.5	300	18.5	195	585	W 000 287 092
3.2	350	37.4	115	345	W 000 287 093
4.0	350	53.8	80	240	W 000 287 094

Welding positions:



Current conditions:



Type of coating:

- Semi thick rutile with Cr & Ni compensation.

MANGANARC 600

General characteristics:

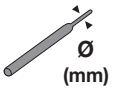
For components submitted to abrasion.
Excellent resistance to wear and impact
(example: excavator buckets).

Main applications:

- Agricultural work.
- Civil works and mining equipment.
- Crawler shoes.
- Hardness: 550 - 650 HV.


HARDFACING
ABRASION

ORDERING INFORMATION:

 Ø (mm)	 (mm)	 kg /1000	Quant.		Cat. nr
					
3.2	450	40.7	135	405	W 000 287 104
4.0	450	61.1	90	270	W 000 287 105
5.0	450	98.3	60	180	W 000 287 106

Also available in small pack see page 6-13

Current conditions:



Type of coating:

- Medium rutile.

MMA coated electrodes for welding cast-iron

CASTARC

General characteristics:

Joining steel and cast-iron.
Repairing casting defects.
Hardfacing of cast-iron.
Excellent for welding high-strength and nodular cast-irons.
VPM vacuum packed can be used without a quiver.

Main applications:

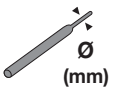
- Casting
- Pipe

Standard

AWS A 5.1: E Ni Fe Ci

REPAIRING AND HARD
FACING CAST-IRON


ORDERING INFORMATION:

 Ø (mm)	 (mm)	 kg /1000	Quant.		Cat. nr
					
2.5	350	19.1	110	660	W 000 287 098
3.2	350	31.4	70	420	W 000 287 099
4.0	350	46.7	45	270	W 000 287 100

Also available in small pack see page 6-13

Current conditions:



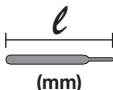
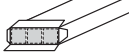
Type of coating:

- Graphite-Basic.

The small pack



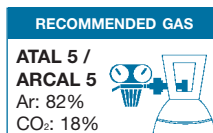
ORDERING INFORMATION:

	 Ø (mm)	 l (mm)	 kg /1000	Quant.		Cat. nr
						
SPEEDARC <i>page 6-2</i>	2.0	350	12.8	70	840	W 000 287 030
	2.5	350	19.5	50	600	W 000 287 031
	3.2	350	31.9	30	360	W 000 287 032
	4.0	350	48.1	20	240	W 000 287 033
RAPIDARC <i>page 6-3</i>	1.6	300	7.5	80	960	W 000 287 006
	2.0	350	11.7	60	720	W 000 287 007
	2.5	350	18.4	38	456	W 000 287 008
	3.2	350	25.0	24	288	W 000 287 009
	4.0	350	44.4	18	216	W 000 287 010
EASYARC <i>page 6-4</i>	2.0	350	12.7	55	660	W 000 287 049
	2.5	350	20.0	35	420	W 000 287 050
	3.2	350	30.0	20	240	W 000 287 051
	4.0	350	50.0	10	120	W 000 287 052
UNIVARC <i>page 6-5</i>	2.0	350	14.0	50	600	W 000 287 016
	2.5	350	17.5	40	480	W 000 287 017
	3.2	350	29.2	24	288	W 000 287 018
	4.0	450	60.0	15	180	W 000 287 019
TUBARC <i>page 6-6</i>	2.0	300	10.0	60	720	W 000 287 038
	2.5	350	17.5	40	480	W 000 287 039
	3.2	350	30.0	20	240	W 000 287 040
	4.0	350	46.7	15	180	W 000 287 041
TENSARC <i>page 6-7</i>	2.5	350	20.0	30	360	W 000 287 072
	3.2	350	35.0	20	240	W 000 287 073
	4.0	350	50.0	10	120	W 000 287 074
RESISTARC <i>page 6-8</i>	2.0	300	21.4	60	720	W 000 287 061
	2.5	300	18.9	40	480	W 000 287 062
	2.5	350	22.3	40	480	W 000 287 063
	3.2	350	35.7	25	300	W 000 287 064
	4.0	350	51.0	15	180	W 000 287 065
INOXARC 316L <i>page 6-9</i>	1.6	300	8.0	50	600	W 000 287 087
	2.0	300	12.0	50	600	W 000 287 088
	2.5	300	16.7	30	360	W 000 287 089
	3.2	350	33.3	15	180	W 000 287 090
	4.0	350	50.0	10	120	W 000 287 091
INOXARC 308L <i>page 6-10</i>	2.0	300	12.0	50	600	W 000 287 079
	2.5	300	16.7	30	360	W 000 287 080
	4.0	350	50.0	10	120	W 000 287 081
INOXARC R 312 <i>page 6-11</i>	2.5	300	17.9	28	336	W 000 287 095
	3.2	350	40.0	15	180	W 000 287 096
	4.0	350	50.0	10	120	W 000 287 097
MANGANARC 600 <i>page 6-12</i>	3.2	450	40.0	20	240	W 000 287 107
	4.0	450	60.0	15	180	W 000 287 108
CASTARC <i>page 6-12</i>	2.5	350	19.2	26	312	W 000 287 101
	3.2	350	33.3	12	144	W 000 287 102
	4.0	350	50.0	10	120	W 000 287 103

STEELMIG G2

General characteristics:

Copper coated solid wire.
Suitable for welding with CO₂ or mixed shielding gases.
Wide range of applications.
Available on plastic spools and metal spool.



Standards

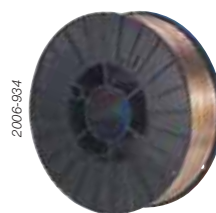
EN ISO 14341-A: G 42 2 M G2Si1
AWS A 5.18: ER 70 S-3

Main applications:

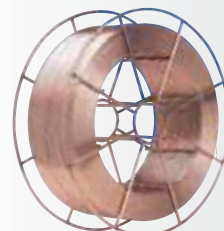
- Transport vehicles.
- Mechanical construction.
- Small metal fitting work.
- Small agricultural repairs.



(Plastic spool Ø 300)



(Plastic spool Ø 200)



(Spool with steel hub Ø 200)

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1597-1):

Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy (J)
				0 °C
Ar/CO ₂	480 - 550	≥ 420	≥ 22	≥ 90

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Diam (mm)	Material	Winding	Weight (kg)	
0.6	200	plastic	precision layer	5	W 000 282 500
	300	plastic	precision layer	15	W 000 282 502
0.8	200	plastic	precision layer	5	W 000 282 506
	300	plastic	precision layer	15	W 000 282 508
	300	plastic	layer	15	W 000 282 509
	300	steel with hub	precision layer	16	W 000 282 510
	300	steel with hub	layer	16	W 000 282 511
	300	steel with hub	layer	16	W 000 282 512
1.0	300	plastic	precision layer	15	W 000 282 512
	300	plastic	layer	15	W 000 282 513
	300	steel with hub	precision layer	16	W 000 282 514
	300	steel with hub	layer	16	W 000 282 515
1.2	300	plastic	precision layer	15	W 000 282 516
	300	plastic	layer	15	W 000 282 517
	300	steel with hub	precision layer	16	W 000 282 518
	300	steel with hub	layer	16	W 000 282 519

**GENERAL
PURPOSE**

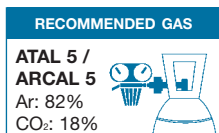
STEELMIG G3

General characteristics:

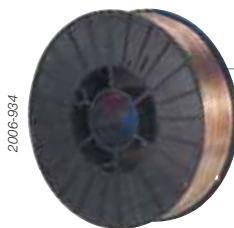
Copper coated solid wire.
Suitable for welding with CO₂
or mixed shielding gases.
Wide range of applications.
Very good arc striking and fusion.
Available on plastic spools and metal spool.

Main applications:

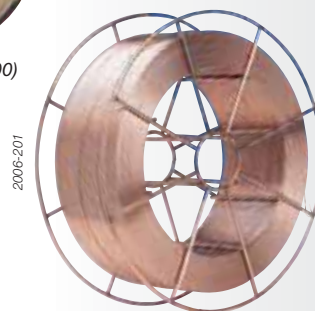
- Transportation vehicles.
- Mechanical construction.
- Small metal fitting work.
- Small agricultural repairs.



(Plastic spool Ø 300)



(Plastic spool Ø 200)



(Steel spool with hub Ø 300)



(Steel spool Ø 300)

MIG/MAG WELDING WIRES

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1597-1):

Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy (J)
				- 20 °C
Ar/CO ₂	500 - 640	≥ 420	≥ 24	≥ 65

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Diam (mm)	Material	Winding	Weight (kg)	
0.6	200	plastic	precision layer	5	W 000 282 561
	300	plastic	precision layer	15	W 000 282 563
	300	steel with hub	precision layer	16	W 000 282 565
0.8	200	plastic	precision layer	5	W 000 282 567
	300	plastic	precision layer	15	W 000 282 569
	300	plastic	layer	15	W 000 282 570
	300	steel with hub	precision layer	16	W 000 282 571
	300	steel with hub	layer	16	W 000 282 572
	300	metal	precision layer	16	W 000 273 848
1.0	300	plastic	precision layer	15	W 000 282 573
	300	plastic	layer	15	W 000 282 574
	300	steel with hub	precision layer	16	W 000 282 575
	300	steel with hub	layer	16	W 000 282 576
	300	metal	precision layer	16	W 000 273 849
1.2	300	plastic	precision layer	15	W 000 282 577
	300	plastic	layer	15	W 000 282 578
	300	steel with hub	precision layer	16	W 000 282 579
	300	steel with hub	layer	16	W 000 282 580
	300	metal	precision layer	16	W 000 273 851

**EXCELLENT
FUSION
PROPERTIES**

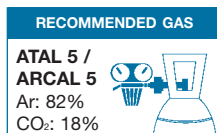
GALVAMIG

General characteristics:

Solid wire suitable for galvanized steels.
Also used for welding electro-zinc sheets.
Excellent for welding thin sheet.
Use with mixed gases, or, for spatter free welding, use ARCAL 14.

Main applications:

- Small metal fitting work.
- Industrial car body fabrication.
- Automobile repair.
- Agricultural maintenance work.



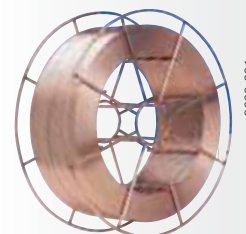
(Plastic spool Ø 300)

Standards

EN ISO 14341-A: G2Ti



(Plastic spool Ø 200)



(Steel spool with hub Ø 200)

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1597-1):

Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy (J)
				0 °C
Ar/CO ₂	570 - 650	≥ 480	≥ 22	≥ 90

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Diam (mm)	Material	Winding	Weight (kg)	
0.6	200	plastic	layer	5	W 000 282 836
	300	plastic	precision layer	15	W 000 282 840
0.8	200	plastic	layer	5	W 000 282 838
	300	plastic	layer	15	W 000 282 841
	300	steel with hub	layer	16	W 000 282 842
	300	steel with hub	precision layer	16	W 000 282 843
1.0	300	plastic	precision layer	15	W 000 282 844
	300	plastic	layer	15	W 000 282 845
	300	steel with hub	precision layer	16	W 000 282 846
	300	steel with hub	layer	16	W 000 282 847

**WELDING
GALVANIZED
STEELS**

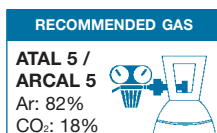
TENOMIG

General characteristics:

Solid wire suitable for higher strength steels.
Elevated mechanical properties (high yield strength).

Main applications:

- Heavy boiler work.
- Transport and lifting equipment.

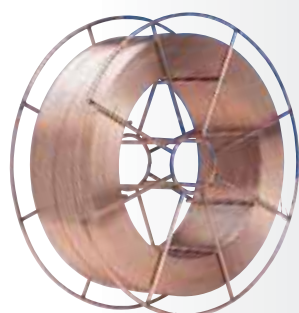


Standards

EN 440: G 4 Mo
EN 12070: G Mn Mo
AWS A 5.28: ER 80 S-G



(Plastic spool Ø 300)



(Steel spool with hub Ø 300)

MIG/MAG WELDING WIRES

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1597-1):

Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy (J)
				- 20 °C
Ar/CO ₂	≥ 550	≥ 480	≥ 22	≥ 47

**HIGHER
STRENGTH
STEELS**

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Diam (mm)	Material	Winding	Weight (kg)	
0.8	300	plastic	precision layer	15	W 000 282 935
	300	steel with hub	precision layer	16	W 000 282 937
	300	steel with hub	layer	16	W 000 282 938
1.0	300	plastic	precision layer	15	W 000 282 939
	300	plastic	layer	15	W 000 282 940
	300	steel with hub	precision layer	16	W 000 282 941
	300	steel with hub	layer	16	W 000 282 942
1.2	300	plastic	precision layer	15	W 000 282 943
	300	plastic	layer	15	W 000 282 944
	300	steel with hub	precision layer	16	W 000 282 945
	300	steel with hub	layer	16	W 000 282 946

WL 308 L Si

General characteristics: Solid wire suitable for 304 stainless steels “not for food applications”.

Main applications:

- Chemical industry.
- Pharmaceutical industry.
- Stainless steel boiler work.

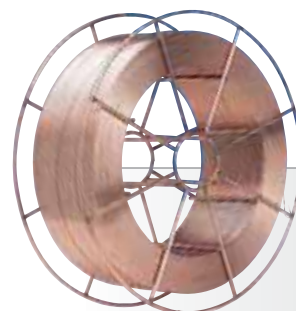
Standards

EN ISO 14343: G 19 9 L Si
AWS A 5.9: ER 308 L Si

RECOMMENDED GAS

ARCAL 12

Ar: 98%
CO: 2%



(Steel spool with hub Ø 300)

WL 316 L Si

General characteristics: Solid wire suitable for welding 316L stainless steels. Widely used for food industry applications.

Main applications:

- Food industry.
- Milk industry.
- Pharmaceutical industry.

RECOMMENDED GAS

ARCAL 12

Ar: 98%
CO: 2%



Standards

EN ISO 14343: G 19 12 3 L Si
AWS A 5.9: ER 316 L Si

INOXMIG 307

General characteristics: Solid wire suitable for depositing a buffer layer to avoid cracking. Excellent for dissimilar steels welding (stainless steel to low or non alloyed steel).

Main applications:

- Automobile repair.
- Military equipment.
- Agricultural works.
- Large thickness assembly.

RECOMMENDED GAS

ARCAL 12

Ar: 98%
CO: 2%



Standards

EN ISO 14343: G 18 8 Mn
AWS A 5.9: ER 307

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to NFA 81-314):

	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy (J)
				+ 20 °C
WL 308 L Si with gas M 11 (Ar + O ₂)	≥ 520	≥ 350	≥ 35	≥ 47
WL 316 L Si with gas M 11 (Ar + O ₂)	≥ 510	≥ 350	≥ 30	≥ 47
INOXMIG 307 with gas M 11 (Ar + O ₂)	≥ 590	≥ 420	≥ 30	≥ 47

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr		
	Ø (mm)	Material	Winding	Weight (kg)	WL 308 L Si	WL 316 L Si	INOXMIG 307
0.8	300	steel	precision layer	15	W 000 283 672	W 000 283 676	W 000 283 105
1.0	300	steel	precision layer	15	W 000 283 144	W 000 283 152	W 000 283 106
1.2	300	steel	precision layer	15	W 000 283 146	-	W 000 283 107
1.6	300	steel	precision layer	15	-	-	W 000 283 108

WL ALMG 5

General characteristics: Solid wire suitable for welding aluminium and aluminium alloys with 5% Mg. Very flexible solution for aluminium applications. Good mechanical properties and high resistance to marine corrosion.

Main applications:

- Car manufacture.
- Naval construction and rail equipment.
- Transport applications.



MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1597-1):

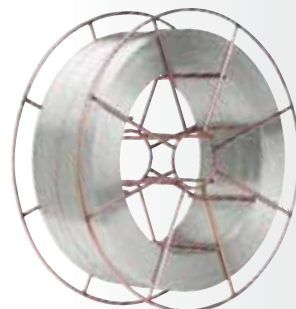
Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)
Ar	≥ 240	≥ 110	> 18

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Ø (mm)	Material	Winding	Weight (kg)	
1.0	300	steel	precision layer	7	W 000 283 689
1.2	300	steel	precision layer	7	W 000 283 690

Standards

EN ISO 18273: S Al 5356
AWS A 5.10: ER 5356



(Steel spool with hub Ø 300)

**ALUMINIUM
& ALUMINIUM
ALLOYS**

Solid wire for welding copper-aluminum alloys.

COPPERMIG

General characteristics: Solid wire for copper-aluminium applications. Excellent for galvanized sheet metal. It can also be used for hard facing applications.

Main applications:

- Automobile repair.
- Joining thin thickness sheets.
- Light vehicles.
- Excellent resistance to marine corrosion.
- Artistic foundry work.



Standards

EN DIN 1736: ER Cu Al 8
AWS A 5.7: ER CuAl1

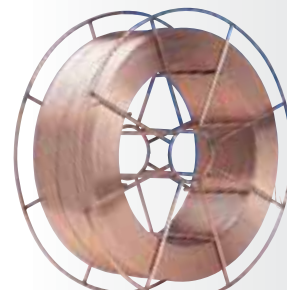
**COPPER ALLOYS
& STEEL CASTINGS**

MECHANICAL PROPERTIES OF THE ALL WELD METAL (according to EN 1597-1):

Shielding Gas	Rm (N/mm ²)	Rp (N/mm ²)	A% 5d	Hardness HB
M 13 (Ar + O ₂)	≥ 410	≥ 200	≥ 45	~ 90

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Ø (mm)	Material	Winding	Weight (kg)	
0.8	300	plastic	precision layer	15	W 000 283 243
1.0	300	steel	precision layer	15	W 000 283 244
1.2	300	steel	precision layer	15	W 000 283 245



(Steel spool with hub Ø 300)

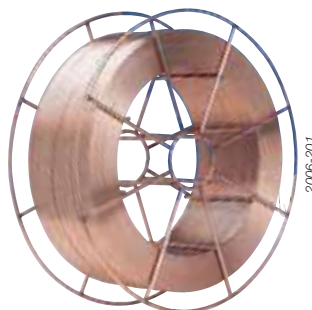
HARDMIG 600

General characteristics:

Solid wire for hard facing subject to abrasion.
High resistance to abrasive wear.
All weld metal, hardness, 620 HB.

Main applications:

- Mineral processing.
- Dredgers.
- Trucks.



(Steel spool Ø 300)

Standards

EN 14700: SFE 8

FOR HARDFACING

ORDERING INFORMATION:

Wire Diam (mm)	SPOOL				Cat. nr
	Ø (mm)	Material	Winding	Weight (kg)	
1.2	300	steel	precision layer	15	W 000 283 293



In certain cases a buffer layer is recommended using INOXMIG 307 (p. 6-18) to avoid cracking.

STEELTIG G2

General characteristics:

STEELTIG G2 for welding mild and structural steels.

Main applications:

- Manufacture and repair.
- First penetration "root" pass.
- Thin thickness welding.

**Classification
G2**

EN 1668: W 42 4 W 2 Si
AWS A 5.18: ER 70 S-3

RECOMMENDED GAS

ARCAL 1



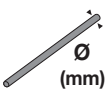
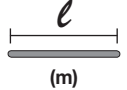
823-037

FILLER METAL FOR TIG WELDING

MECHANICAL CHARACTERISTICS OF THE ALL WELD METAL (according to EN 1668):

Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
				- 20 °C
Ar/CO ₂	500 - 640	< 420	< 20	< 47

ORDERING INFORMATION: rods 1 m length packed in tubes of 5 kg

 (mm)	 (m)	 kg	STEELTIG G2
			Cat. nr
1.6	1	5	W 000 283 298
2.0	1	5	W 000 283 299
2.4	1	5	W 000 283 300

WL ROD 308L

WL ROD 316L

General characteristics:

WL ROD 308L for welding standard stainless steels.

WL ROD 316L for welding stainless steels for the food industry.

Main applications:

- Food industry, chemical and pharmaceutical industries.
- First penetration "root" pass.
- Thin thickness stainless steel welding.
- Welding of pipework & tubes.

**Classification
308L**

NF A 81 313: M-Z19.9 L Si
AWS A 5.9: ER 308 L Si

**Classification
316L**

NF A 81 313: M-Z19-12.3 L Si
AWS A 5.9: ER 316 L Si

RECOMMENDED GAS

ARCAL 1

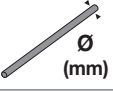
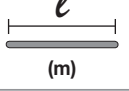


823-037

MECHANICAL CHARACTERISTICS OF THE ALL WELD METAL (according to EN 12072):

	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)	Impact energy V (J)
				+ 20 °C
WL ROD 308L Ar	> 520	> 350	> 35	> 50
WL ROD 316L Ar/CO ₂	> 510	> 310	> 30	> 50

ORDERING INFORMATION: rods 1 m length packed in tubes of 5 kg

 Ø (mm)	 l (m)	 kg	WL ROD 308 L	WL ROD 316 L
			Cat. nr	Cat. nr
1.6	1	5	W 000 283 609	W 000 283 606
2.0	1	5	W 000 283 610	W 000 283 607
2.4	1	5	W 000 283 611	W 000 283 608



WL ROD ALMG 5

Main applications:

- All types of repairs.
- Chemical and pharmaceutical industries.
- Automotive applications.
- Aluminium and aluminium alloys with up to 5% Mg.
- High resistance to marine corrosion.

Classification

NF A 81 331: N - Al Mg R
AWS A 5.10: R 5356

RECOMMENDED GAS

ARCAL 1



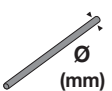
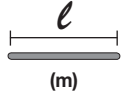
823-037

FILLER METAL FOR TIG WELDING

MECHANICAL CHARACTERISTICS OF THE ALL WELD METAL (according to EN ISO 18273):

Shielding Gas	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation A 5 (%)
Ar	≥ 240	≥ 110	≥ 17

ORDERING INFORMATION: rods 1 m length packed in tubes of 5 kg

 Ø (mm)	 l (m)	 kg	WL ROD ALMG 5
			Cat. nr
2.0	1	5	W 000 283 698
2.4	1	5	W 000 283 699
3.2	1	5	W 000 283 700