

Cor-A-Rosta 304L

Stainless steel rutile cored wire

Classification

AWS A5.22 : E308LT0-1/-4
ISO 17663-A : T 19 9 L R C/M 3

General description

Gas shielded flux cored stainless steel wire electrode for downhand welding

Stable arc, low spatter and good slag removal

Excellent wire feeding and operator appeal

Bright appearance of weld metal

Welding positions



ISO/ASME PA/1G PB/2F PC/2G

Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
C1 : Active Gas 100% CO₂
Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	LR	TÜV
M21	308LMS	4550S		+
C1	308LMS		304L	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.7	19.5	10	8

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						+20°C	-110°C
Required: AWS A5.22			not required	min. 520	min. 35		
ISO 17663-A			min. 320	min. 510	min. 30		
Typical values	M21/C1	AW	400	560	42	80	40

Packaging and available sizes

Unit type	Diameter (mm)	
	1.2	1.6
5 kg plastic spool S200	X	
15 kg spool S300	X	X

Cor-A-Rosta 304L: rev. EN 23

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 304L

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Extra low carbon (C <0.03%)					
	X2 CrNi 19 11		1.4306	(TP)304L CF-3	S30403 J92500
	X2 CrNiN 18 10		1.4311	(TP)304LN 302,304	S30453 S30400
Medium carbon (C >0.03%)					
	X4 CrNi 18 10		1.4301	(TP)304	S30409
		GX5 CrNi 19 10	1.4308	CF 8	J92600
Ti-, Nb stabilized					
	X6 CrNiTi 18 10		1.4541	(TP)321 (TP)321H	S32100 S32109
	X6 CrNiNb 18 10		1.4550	(TP)347 (TP)347H	S34700 S34709
		GX5 CrNiNb 19 10	1.4552	CF-8C	J92710

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
1.2	100-250A	100-250A	100-200A
1.6	140-300A	140-300A	140-200A

Remarks/ Application advice

Use for positional welding: Cor-A-Rosta P304L

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Cor-A-Rosta P304L

Stainless steel rutile cored wire

Classification

AWS A5.22 : E308LT1-1/-4
ISO 17663-A : T 19 9 L P C/M 2

General description

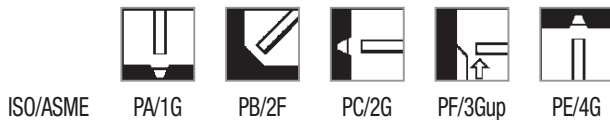
Gas shielded flux cored stainless steel wire electrode for positional welding

Stable arc, low spatter and good slag removal

Excellent wire feeding and operator appeal

Bright appearance of weld metal

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
C1 : Active Gas 100% CO₂
Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+
C1			pending

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.7	19.5	10	8

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						+20°C	-110°C
Required: AWS A5.22			not required	min. 520	min. 35		
ISO 17663-A			min. 320	min. 510	min. 30		
Typical values	M21/C1	AW	400	560	42	80	40

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
15 kg spool S300	X

Cor-A-Rosta P304L: rev. EN 23

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Cor-A-Rosta P304L

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Extra low carbon (C <0.03%)					
	X2 CrNi 19 11		1.4306	(TP)304L CF-3	S30403 J92500
	X2 CrNiN 18 10		1.4311	(TP)304LN 302,304	S30453 S30400
Medium carbon (C >0.03%)					
	X4 CrNi 18 10		1.4301	(TP)304	S30409
		GX5 CrNi 19 10	1.4308	CF 8	J92600
Ti-, Nb stabilized					
	X6 CrNiTi 18 10		1.4541	(TP)321 (TP)321H	S32100 S32109
	X6 CrNiNb 18 10		1.4550	(TP)347 (TP)347H	S34700 S34709
		GX5 CrNiNb 19 10	1.4552	CF-8C	J92710

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions			
	PA/1G	PB/2F	PC/2G	PF/3G up
1.2	100-250A	100-250A	100-200A	100-180A

Remarks/ Application advice

Use for downhand welding: Cor-A-Rosta 304L

Cor-A-Rosta 347

Stainless steel rutile cored wire

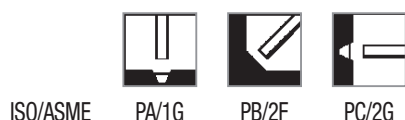
Classification

AWS A5.22 : E347T1-1
ISO 17663-A : T 19 9 Nb R M 3

General description

Rutile gas shielded stainless steel wire electrode for downhand welding
For Ti or Nb stabilized 304 or equivalent steels
Excellent resistance in oxidizing environments such as nitric acid
High resistance to intergranular corrosion
Easy slag release and smooth bead appearance

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
Amount : 15-25 l/min

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	FN (acc. WRC 192)
M21/C1	0.05	1.4	0.6	19.5	10	5

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) +20°C
Required: AWS A5.22			not required	min. 520	min. 30	
ISO 17663-A			min. 350	min. 550	min. 25	
Typical values	M21	AW	435	600	42	90

Packaging and available sizes

Unit type	Diameter (mm)
15 kg spool S300	X

Cor-A-Rosta 347: rev. EN 23

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 347

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Ti-, Nb stabilized					
	X6 CrNiTi 18 10		1.4541	(TP)321 (TP)321H	S32100 S32109
	X6 CrNiNb 18 10		1.4550	(TP)347 (TP)347H	S34700 S34709
		GX5 CrNiNb 19-10	1.4552	CF-8C	J92710
Non stabilized					
	X4CrNi 18-10		1.4301	302 (TP)304	S30400
	X2CrNi 19-11		1.4306	(TP)304L	S30403
		GX5 CrNi 19-10	1.4308	CF-8	J92600
			1.4312	(TP)304H	S30409

Welding parameters, optimum fill passes in shielding gas M21

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
1.2	100-250A	100-250A	100-200A

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Cor-A-Rosta 316L

Stainless steel rutile cored wire

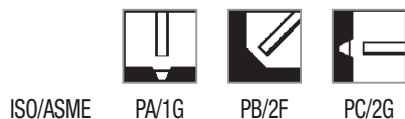
Classification

AWS A5.22 : E316LT0-1/ -4
ISO 17663-A : T 19 12 3 L R C/M 3

General description

Gas shielded flux cored stainless steel wire electrode for downhand welding
Stable arc, low spatter and good slag removal
Excellent wire feeding and operator appeal
Bright appearance of weld metal

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
C1 : Active Gas 100% CO₂
Amount : 15-25 l/min

Approvals

Shielding gas	BV	DNV	GL	LR	TÜV
M21		308LMS	4550S		+
C1	316L	316LMS		316L	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.5	19	12	2.7	8

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						+20°C	-110°C
Required: AWS A5.22			not required	min. 485	min. 30		
ISO 17663-A			min. 320	min. 510	min. 25		
Typical values	M21/C1	AW	440	580	38	70	40

Packaging and available sizes

Unit type	Diameter (mm)	
	1.2	1.6
15 kg spool S300	X	X

Cor-A-Rosta 316L: rev. EN 23

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Cor-A-Rosta 316L

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Extra low carbon (C <0.03%)					
	X2 CrNiMo 17-12-2		1.4404	(TP)316L CF-3M	S31603 J92800
	X2 CrNiMo 18-14-3		1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2		1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3		1.4429		
Medium carbon (C >0.03%)					
	X4 CrNiMo 17-12-2		1.4401	(TP)316	S31600
	X4 CrNiMo 17-13-3		1.4436		
		GX5 CrNiMo 19-11	1.4408	CF 8M	J92900
Ti-, Nb stabilized					
	X6 CrNiMoTi 17-12-2		1.4571	316Ti	S31635
	X6 CrNiMoNb 17-12-2		1.4580	316Cb	S31640
	X6 CrNiNb 18-10		1.4550	(TP)347	S34700
		GX5 CrNiNb 19-10	1.4552	CF-8C	J92710

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions	
	PA/1G	PB/2F
1.2	100-250A	100-250A
1.6	140-300A	140-300A

Remarks/ Application advice

Use for positional welding: Cor-A-Rosta P316L

Cor-A-Rosta P316L

Stainless steel rutile cored wire

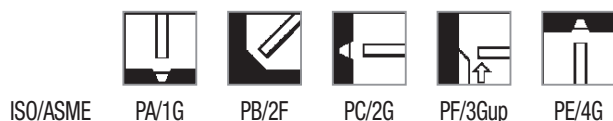
Classification

AWS A5.22 : E316LT1-1/-4
ISO 17663-A : T 19 12 3 L P C/M 2

General description

Gas shielded flux cored stainless steel wire electrode for positional welding
Stable arc, low spatter and good slag removal
Excellent wire feeding and operator appeal
Bright appearance of weld metal

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
C1 : Active Gas 100% CO₂
Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+
C1	316LMS		pending

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.5	19	12	2.7	6

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						+20°C	-110°C
Required: AWS A5.22			not required	min. 485	min. 30		
ISO 17663-A			min. 320	min. 510	min. 25		
Typical values	M21/C1	AW	440	580	38	70	40

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
5 kg plastic spool S200	X
15 kg spool S300	X

Cor-A-Rosta P316L: rev. EN 23

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Cor-A-Rosta P316L

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Extra low carbon (C <0.03%)					
	X2 CrNiMo 17-12-2		1.4404	(TP)316L CF-3M	S31603 J92800
	X2 CrNiMo 18-14-3		1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2		1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3		1.4429		
Medium carbon (C >0.03%)					
	X4 CrNiMo 17-12-2		1.4401	(TP)316	S31600
	X4 CrNiMo 17-13-3		1.4436		
Ti-, Nb stabilized					
	X6 CrNiMoTi 17-12-2		1.4571	316Ti	S31635
	X6 CrNiMoNb 17-12-2		1.4580	316Cb	S31640
	X6 CrNiNb 18-10		1.4550	(TP)347	S34700
		GX5 CrNiNb 19-10	1.4552	CF-8C	J92710

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions			
	PA/1G	PB/2F	PC/2G	PF/3G up
1.2	100-250A	100-250A	100-200A	100-200A

Remarks/ Application advice

Use for downhand welding: Cor-A-Rosta 316L

Cor-A-Rosta 309L

Stainless steel rutile cored wire

Classification

AWS A5.22 : E309LT0-1/-4
ISO 17663-A : T 23 12 L R C/M 3

General description

Gas shielded flux cored high CrNi alloyed wire electrode for downhand welding
For welding stainless to mild steel and buffer layers in clad steel
Excellent weldability and self releasing slag
High resistance to embrittlement

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
C1 : Active Gas 100% CO₂
Amount : 15-25 l/min

Approvals

Shielding gas	BV	DNV	GL	LR	TÜV
M21		308LMS	4550S		+
C1	309L	309LMS		SS/CMn	pending

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	FN (acc. WRC 192)
M21/C1	0.03	1.4	0.6	24	12.5	15

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						+20°C	-20°C
Required: AWS A5.22			not required	min. 520	min. 30		
ISO 17663-A			min. 320	min. 510	min. 25		
Typical values	M21/C1	AW	445	560	36	45	40

Packaging and available sizes

Unit type	Diameter (mm)	
	1.2	1.6
5 kg plastic spool S200	X	
15 kg spool S300	X	X

Cor-A-Rosta 309L: rev. EN 24

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 309L

Materials to be welded

Steel grades	EN 10088-1/-2	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Corrosion resistant cladsteels				
	X2 CrNiN 18-10	1.4311	(TP)304LN	S30453
	X2 CrNi 19-11	1.4306	(TP)304L	S30403
			CF-3	J92500
	X4 CrNi 18-10	1.4301	(TP)304	S30400

Dissimilar metals (mild and low alloyed steel to CrNi or CrNiMo stainless steel)

Build-up welding on mild and low alloyed steel

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
1.2	100-250A	100-250A	100-200A
1.6	140-300A	140-300A	140-200A

Remarks/ Application advice

Use for positional welding: Cor-A-Rosta P309L

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Cor-A-Rosta P309L

Stainless steel rutile cored wire

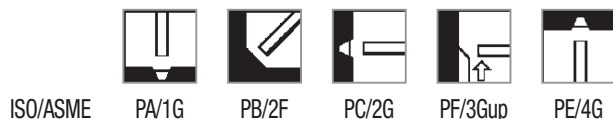
Classification

AWS A5.22 : E309LT1-1/-4
ISO 17663-A : T 23 12 L P C/M 2

General description

Gas shielded flux cored high CrNi alloyed wire electrode for positional welding
For welding stainless to mild steel and buffer layers in clad steel
Excellent weldability and self releasing slag
High resistance to embrittlement

Welding positions



ISO/ASME

PA/1G

PB/2F

PC/2G

PF/3Gup

PE/4G

Current type/Shielding gas (ISO 14175)

DC +
M21 : Mixed gas Ar+ (>15-25%) CO₂
C1 : Active Gas 100% CO₂
Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+
C1	309LMS		pending

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	FN (acc. WRC 192)
M21/C1	0.04	1.3	0.6	24	12.5	15

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
						+20°C	-20°C
Required: AWS A5.22			not required	min. 520	min. 30		
ISO 17663-A			min. 320	min. 510	min. 25		
Typical values	M21/C1	AW	445	560	36	65	55

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
5 kg plastic spool S200	X
15 kg spool S300	X

Cor-A-Rosta P309L: rev. EN 24

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Cor-A-Rosta P309L

Materials to be welded

Steel grades	EN 10088-1/-2	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Corrosion resistant cladsteels				
	X2 CrNiN 18-10	1.4311	(TP)304LN	S30453
	X2 CrNi 19-11	1.4306	(TP)304L	S30403
			CF-3	J92500
	X4 CrNi 18-10	1.4301	(TP)304	S30400

Dissimilar metals (mild and low alloyed steel to CrNi or CrNiMo stainless steel)

Build-up welding on mild and low alloyed steel

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions			
	PA/1G	PB/2F	PC/2G	PF/3G up
1.2	100-250A	100-250A	100-200A	100-200A

Remarks/ Application advice

Use for downhand welding: Cor-A-Rosta 309L

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Cor-A-Rosta 309MoL

Stainless steel rutile cored wire

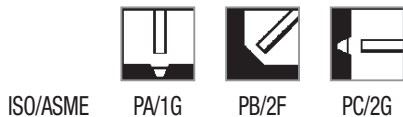
Classification

AWS A5.22 : E309LMoT0-1/-4
 ISO 17663-A : T 23 12 2 L R C/M 3

General description

Gas shielded flux cored high CrNiMo alloyed wire electrode for downhand welding
 High Corrosion resistant deposit
 Specially developed for welding stainless steel to mild steel and buffer layers in cladding
 Maximum plate thickness in butt welds ~ 12 mm
 Suitable for repair welding in dissimilar joints and steels difficult to weld

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
 M21 : Mixed gas Ar+ (>15-25%) CO₂
 C1 : Active Gas 100% CO₂
 Amount : 15-25 l/min

Approvals

Shielding gas	BV	DNV	GL	LR	TÜV
M21		308LMS	4550S		+
C1	UP	309MoLMS		SS/CMn	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.7	23	12.8	2.3	20

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) +20°C
Required: AWS A5.22			not required	min. 520	min. 25	
ISO 17663-A			min. 350	min. 550	min. 25	
Typical values	M21/C1	AW	550	700	30	50

Packaging and available sizes

Unit type	Diameter (mm)	
	1.2	1.6
15 kg spool S300	X	X

Cor-A-Rosta 309MoL: rev. EN 24

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 309MoL

Materials to be welded

Steel grades	EN 10088-1/-2	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Corrosion resistant cladsteels				
	X2 CrNiMo 17-12-2	1.4404	(TP)316L CF-3M	S31603 J92800
	X2 CrNiMo 18-14-3	1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2	1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3	1.4429		
	X4 CrNiMo 17-13-3	1.4436		
	X6 CrNiMoTi 17-12-2	1.4571	316Ti	S31635
	X10 CrNiMoTi 17-3	1.4573	316Ti	S31635
	X6 CrNiMoNb 17-12-2	1.4580	316Cb	S31640

Welding dissimilar metals: mild steel or low alloyed steel to stainless CrNi or CrNiMo-steel up to max. thickness of 12 mm.
Build-up welding on mild and low alloyed steel

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
1.2	100-250A	100-250A	100-200A

Remarks/ Application advice

Use for positional welding Cor-A-Rosta P309MoL

Cor-A-Rosta P309MoL

Stainless steel rutile cored wire

Classification

AWS A5.22 : E309LMoT1-1/-4
 ISO 17663-A : T 23 12 2 L P C/M 2

General description

Gas shielded flux cored high CrNi alloyed wire electrode for positional welding
 High corrosion resistant deposit
 Specially developed for welding stainless steel to mild steel and buffer layers in cladding
 Maximum plate thickness in butt welds ~ 12 mm
 Suitable for repair welding in dissimilar joints and steels difficult to weld

Welding positions



Current type/Shielding gas (ISO 14175)

DC +
 M21 : Mixed gas Ar+ (>15-25%) CO₂
 C1 : Active Gas 100% CO₂
 Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	FN (acc. WRC 192)
M21/C1	0.03	0.8	0.6	22.7	12.5	2.3	20

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) +20°C
Required: AWS A5.22 ISO 17663-A			not required min. 350	min. 520 min. 550	min. 25 min. 25	
Typical values	M21/C1	AW	525	675	34	45

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
15 kg spool S300	X

Cor-A-Rosta P309MoL: rev. EN 23

Cor-A-Rosta P309MoL

Materials to be welded

Steel grades	EN 10088-1/-2	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Corrosion resistant cladsteels				
	X2 CrNiMo 17-12-2	1.4404	(TP)316L CF-3M	S31603 J92800
	X2 CrNiMo 18-14-3	1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2	1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3	1.4429		
	X4 CrNiMo 17-13-3	1.4436		
	X6 CrNiMoTi 17-12-2	1.4571	316Ti	S31635
	X10 CrNiMoTi 17-3	1.4573	316Ti	S31635
	X6 CrNiMoNb 17-12-2	1.4580	316Cb	S31640

Welding dissimilar metals: mild steel or low alloyed steel to stainless CrNi or CrNiMo-steel up to max. thickness of 12 mm.
Build-up welding on mild and low alloyed steel

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions			
	PA/1G	PB/2F	PC/2G	PF/3G up
1.2	100-250A	100-250A	100-200A	100-200A

Remarks/ Application advice

Use for downhand welding Cor-A-Rosta 309MoL

Cor-A-Rosta 4462

Stainless steel rutile cored wire

Classification

AWS A5.22 : E2209T0-1/-4
 ISO 17663-A : T 22 9 3 N L R M 3

General description

Gas shielded flux cored wire electrode for duplex stainless steel welding in downhand position

Excellent weldability

Applicable up to a service temperature of 250°C

High resistance to general corrosion, pitting and stress corrosion conditions

High yield strength > 500 N/mm²

M21 shielding gas is recommended

Welding positions



ISO/ASME PA/1G PB/2F PC/2G

Current type/Shielding gas (ISO 14175)

DC +
 M21 : Mixed gas Ar+ (>15-25%) CO₂
 C1 : Active Gas 100% CO₂
 Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	N	FN (acc. WRC 192)
M21	0.03	1.2	0.7	23	9.2	3.1	0.12	40

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength	Tensile strength	Elongation	Impact ISO-V(J)	
			(N/mm ²)	(N/mm ²)	(%)	-20°C	-50°C
Required: AWS A5.22			not required	min. 520	min. 25		
ISO 17663-A			min. 350	min. 550	min. 25		
Typical values	M21	AW	630	800	29	40	30

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
15 kg spool S300	X

Cor-A-Rosta 4462: rev. EN 24

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 4462

Materials to be welded

Steel grades	EN 10088-1/-2/-4	Mat. Nr	ASTM / ACI A240	UNS
Duplex stainless steels				
	X2 CrNiMoN 22 -5-3	1.4462		S31803
		1.4417		S31500
	X3 CrNiMoN 27-5-2	1.4460		S31200
	X2 CrNiN 23-4	1.4362		S32304
	X2 CrMnNi21-5-1	1.4162		S32101

Dissimilar joints such as un- and low alloyed steel to duplex stainless steel

Welding parameters, optimum fill passes in shielding gas M21

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
1.2	100-250A	100-250A	100-200A

Remarks/ Application advice

Use for positional welding Cor-A-Rosta P4462
Welding with Heat-Input max. 2.5 kJ/mm
Interpass temperature max. 150°C

Cor-A-Rosta P4462

Stainless steel rutile cored wire

Classification

AWS A5.22 : E2209T1-1/-4
ISO 17663-A : T 22 9 3 N L P M 2

General description

Gas shielded flux cored wire electrode for positional welding of duplex stainless steel

Excellent weldability

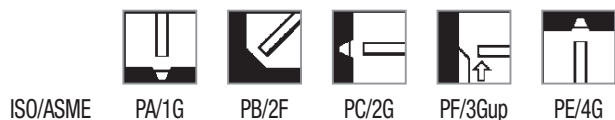
Applicable up to a service temperature of 250°C

High resistance to general corrosion, pitting and stress corrosion conditions

High yield strength > 500 N/mm²

M21 shielding gas is recommended

Welding positions



ISO/ASME

PA/1G

PB/2F

PC/2G

PF/3Gup

PE/4G

Current type/Shielding gas (ISO 14175)

DC +

M21 : Mixed gas Ar+ (>15-25%) CO₂

Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	N	FN (acc. WRC 192)
M21	0.03	1.2	0.7	23	9.2	3.1	0.12	40

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength	Tensile strength	Elongation	Impact ISO-V(J)	
			(N/mm ²)	(N/mm ²)	(%)	-20°C	-50°C
Required: AWS A5.22			not required	min. 690	min. 20		
ISO 17663-A			min. 450	min. 550	min. 20		
Typical values	M21	AW	630	800	29	65	55

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
15 kg spool S300	X

Cor-A-Rosta P4462: rev. EN 24

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta P4462

Materials to be welded

Steel grades	EN 10088-1/-2/-4	Mat. Nr	ASTM / ACI A240	UNS
Duplex stainless steels				
	X2 CrNiMoN 22 -5-3	1.4462		S31803
		1.4417		S31500
	X3 CrNiMoN 27-5-2	1.4460		S31200
	X2 CrNiN 23-4	1.4362		S32304
	X2 CrMnNi21-5-1	1.4162		S32101

Dissimilar joints such as un- and low alloyed steel to duplex stainless steel

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions			
	PA/1G	PB/2F	PC/2G	PF/3G up
1.2	100-250A	100-250A	100-200A	130-180A

Remarks/ Application advice

Use for downhand welding Cor-A-Rosta 4462
Welding with Heat-Input max. 2.5 kJ/mm
Interpass temperature max. 150°C

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 2509

Stainless steel rutile cored wire

Classification

AWS A5.22 : E2209T0-4
ISO 17663-A : T 22 9 3 N L R M 3

General description

Gas shielded flux cored wire electrode for duplex stainless steel welding in downhand position

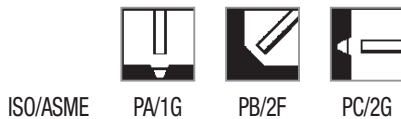
Excellent weldability

Applicable up to a service temperature of 250°C

High resistance to general corrosion, pitting and stress corrosion conditions

High yield strength > 500 N/mm²

Welding positions



ISO/ASME

PA/1G

PB/2F

PC/2G

Current type/Shielding gas (ISO 14175)

DC +

M21 : Mixed gas Ar+ (>15-25%) CO₂

C1 : Active Gas 100% CO₂

Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.6	20	10	3.1	8

Mechanical properties, typical, all weld metal

Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) -20°C
Required: AWS A5.22		not required	min. 520	min. 25	
ISO 17663-A		min. 350	min. 550	min. 25	
Typical		630	800	29	40

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
15 kg spool S300	X

Cor-A-Rosta 2509: rev. EN 01

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta 2509

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM / ACI A276/A351/A473	UNS
Regular and super duplex stainless steels					
	X2CrNiMoN 25-7-4		1.4410		
	X4 CrNiMoN 27-5-2		1.4460		
	X2 CrNiMoN 22-5-3		1.4462	2205	S31803
		GX6 CrNiMo 24-8-2	1.4463		
				CD-4MCu	S32550
				Zeron 100	S32760

Super duplex stainless steel grades: chemical composition approximately:
24-27% Cr, 6-9% Ni, 3-4% Mo, 0.10-0.25% N alloyed also with Cu and/or W

Welding parameters, optimum fill passes in shielding gas M21

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
1.2	100-250A	100-250A	100-200A

Remarks/ Application advice

Use for positional welding Cor-A-Rosta P2509
Welding with Heat-Input max. 2.5 kJ/mm
Interpass temperature max. 150°C

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request

Cor-A-Rosta P2509

Stainless steel rutile cored wire

Classification

AWS A5.22 : E2209T1-4
ISO 17663-A : T 22 9 3 N L P C/M 2

General description

Gas shielded flux cored wire electrode for positional welding of duplex stainless steel

Excellent weldability

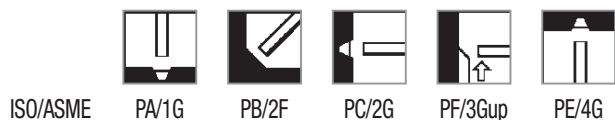
Applicable up to a service temperature of 250°C

High resistance to general corrosion, pitting and stress corrosion conditions

High yield strength > 500 N/mm²

M21 shielding gas is recommended

Welding positions



ISO/ASME

PA/1G

PB/2F

PC/2G

PF/3Gup

PE/4G

Current type/Shielding gas (ISO 14175)

DC +

M21 : Mixed gas Ar+ (>15-25%) CO₂

Amount : 15-25 l/min

Approvals

Shielding gas	DNV	GL	TÜV
M21	308LMS	4550S	+

Chemical composition (w%) and Ferrite Number (FN), Typical, all weld metal

Shielding gas	C	Mn	Si	Cr	Ni	Mo	FN (acc. WRC 192)
M21/C1	0.03	1.3	0.6	20	10	3.1	8

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength	Tensile strength	Elongation	Impact ISO-V(J)	
			(N/mm ²)	(N/mm ²)	(%)	-20°C	-50°C
Required: AWS A5.22			not required	min. 690	min. 20		
ISO 17663-A			min. 450	min. 550	min. 20		
Typical values	M21	AW	640	790	29	65	55

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
15 kg spool S300	X

Cor-A-Rosta P2509: rev. EN 01

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Cor-A-Rosta P2509

Materials to be welded

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM / ACI A276/A351/A473	UNS
Regular and super duplex stainless steels					
	X2CrNiMoN 25-7-4		1.4410		
	X4 CrNiMoN 27-5-2		1.4460		
	X2 CrNiMoN 22-5-3		1.4462	2205	S31803
		GX6 CrNiMo 24-8-2	1.4463		
				CD-4MCu	S32550
				Zeron 100	S32760

Super duplex stainless steel grades: chemical composition approximately:
24-27% Cr, 6-9% Ni, 3-4% Mo, 0.10-0.25% N alloyed also with Cu and/or W

Welding parameters, optimum fill passes in shielding gas M21/C1

Diameter (mm)	Welding positions			
	PA/1G	PB/2F	PC/2G	PF/3G up
1.2	100-250A	100-250A	100-200A	130-180A

Remarks/ Application advice

Use for downhand welding Cor-A-Rosta 2509
Welding with Heat-Input max. 2.5 kJ/mm
Interpass temperature max. 150°C

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