

BARRETTE TIG



TIG RODS

OEFERLIKON

CARBOROD (ETC TIG SG1)



TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai dolci e al carbonio impiegata nelle prime passate e a fondo cianfrino come passata di supporto o nei casi dove sia impossibile la ripresa a rovescio. Ottime caratteristiche meccaniche e di tenacità a bassa temperatura.

Carborod is a TIG rod suitable for welding mild and C-Mn steels; Carborod is generally used for the root pass and to support welding when no back pass is possible. Excellent mechanical and toughness properties for low temperature applications.

Classification	
AWS	A5.18: ER 70S-3
EN	1668: W 42 4 W2Si

Approvals	Grades
DNV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.07	1	0.65	≤ 0.025	≤ 0.025	-	-	-	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -40°C	Hardness
As Welded	≥ 420	500-640	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

S(P)235 to S(P)355; GP240; GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-					
PA	PB	PC	PF	PE	PF2

Packaging data: Tube 5 Kg

Diameters (L: 1000 mm)	1,0	1,2	1,6	2,0	2,4	3,2

Further forms of delivery on request.

CARBOROD 1

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai dolci e al carbonio impiegata nelle prime passate e a fondo cianfrino come passata di supporto o nei casi dove sia impossibile la ripresa a rovescio. Ottime caratteristiche meccaniche e di tenacità a bassa temperatura.

Carborod 1 is a TIG rod suitable for welding mild and C-Mn steels. Carborod 1 is generally used for the root pass and to support welding when no back pass is possible. Excellent mechanical and toughness properties for low temperature applications.

Classification	
AWS	A5.18: ER 70S-6
EN	1668: W 42 4 W3Si1

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	1.50	0.90	≤ 0.025	≤ 0.025	-	-	-	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -50°C	Hardness
As Welded	≥ 420	500-640	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

S(P)235 to S(P)355; GP240; GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 Kg

Diameters (L: 1000 mm)	1,0	1,2	1,6	2,0	2,4	3,2

Further forms of delivery on request.

TIG Rods C-Mn steels and low-alloy steels

Barretta per la saldatura di acciai debolmente legati con 0,5 Mo e per acciai con elevata resistenza. Il metallo depositato presenta una notevole insensibilità alle cricche e alla fessurazione da solidificazione. Applicabile in campo nucleare.

Carborod Mo is a TIG rod suitable for welding 0,5 Mo steels and heat resistant steels. The weld deposit is highly resistant to cold cracking. Recommended for nuclear applications.

Classification	
AWS	5.28: ER70S-A1
EN	21952-A: W MoSi

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	1	0.60	-	-	-	-	0.50	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -20°C	Hardness
PWHT 620°C x 1h	≥ 400	≥ 515	≥ 20	≥ 47	
As Welded	≥ 400	≥ 520	≥ 22	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

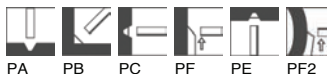
S(P)235-S(P)460, 16Mo3

Storage

Keep dry and avoid condensation

Current condition and welding position

DC -



Packaging data: Tube 5 Kg

Diameters (L: 1000 mm)	1,0	1,6	2,0	2,4	3,2	
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Further forms of delivery on request.

CARBOROD 80S-D2 (ETC TIG KV2)



TIG Rods C-Mn steels and low-alloy steels

Barretta per la saldatura di acciai debolmente legati con 0,5 Mo e per acciai con elevata resistenza. Il metallo depositato presenta una notevole insensibilità alle cricche e alla fessurazione da solidificazione.

Carborod 80S-D2 is a TIG rod suitable for welding 0,5% Mo steels and high temperature resistant steels. The weld deposit is resistant to cold cracking.

Classification	
AWS	A5.28: ER 80S-D2

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	1.85	0.60	≤ 0.020	≤ 0.020	-	-	0.50	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -30°C	Hardness
PWHT 620°C x 1h	≥ 460	530-680	≥ 22	≥ 47	
As Welded	≥ 470	≥ 550	≥ 22	≥ 27	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

S(P)235-S(P)460, 16Mo3

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-

PA PB PC PG PF PE PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,2	1,6	2,0	2,4	3,2	
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Further forms of delivery on request.

CARBOROD KV5 (ETC TIG KV5)



TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai con 1,25% Cr e 0,5% Mo. Ottime caratteristiche meccaniche. Può essere impiegato per la saldatura dell'acciaio con 0,9% Cr e 0,5% Mo. Il deposito è insensibile al fenomeno delle fessurazioni.

Carborod CrMo1 is a TIG rod suitable for welding 1,25% Cr 0,5% Mo and 0,9% Cr 0,5% Mo steels. Excellent mechanical properties. The weld deposit is resistant to cold cracking.

Classification	
AWS	A5.28: ER 80S-B2
EN	21952-B: W 55M 1CM

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	0.56	0.50	≤ 0.020	≤ 0.020	1.25	-	0.50	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 690°C x 1h	≥ 355	≥ 550	≥ 20	≥ 70	
PWHT 620°C x 1h	≥ 470	≥ 550	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

13CrMo4-5, 13CrMoSi5-5; G17CrMo5-5

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-					
					
PA	PB	PC	PF	PE	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2		
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Further forms of delivery on request.

CARBOROD KV3 (ETC TIG KV3)



TIG Rods C-Mn steels and low-alloy steels

Barretta adatta per la saldatura di acciai con 2,25% Cr. Indicata anche per la saldatura degli acciai debolmente legati con 2,25% Cr – 1,0% Mo. Ottime caratteristiche meccaniche e deposito e grande insensibilità alle fessurazioni.

Carborod CrMo2 is a TIG rod suitable for welding low alloy 2,25% Cr steels, 10 Cr Mo 910-G5 and 10 Cr Mo 9-10 steels. Excellent mechanical properties. Good x-ray quality.

Classification	
AWS	A5.28: ER 90S-B3
EN	21952-B: W 62M 2C1M

Approvals	Grades
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Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	0.60	0.55	≤ 0.020	≤ 0.020	2.40	-	1	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 690°C x 1h	≥ 400	≥ 620	≥ 18	≥ 70	
PWHT 690°C x 1h	≥ 540	≥ 620	≥ 18	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

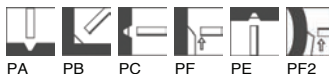
10CrMo9-10, 12CrMo9-10; A387 Gr.22, Cl 1and 2, A 182 Gr.F 22, A 336 Gr.F22

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2		
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Further forms of delivery on request.

CARBOROD CrMo5 (ETC TIG KV4)

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai resistenti allo scorrimento a caldo con 5% Cr 0,5% Mo. Impiegato nell'industria chimica e nei processi di sintesi dell'ammoniaca. Si consiglia preriscaldamento ed interpass di 250-300°C.

Carborod CrMo5 is a TIG rod suitable for welding creep resistant 5% Cr 0,5% Mo steels. Suitable for applications including chemical and ammonia synthesis plants. Pre-heating and interpass temperatures in the range 250-300°C are recommended.

Classification		Approvals	Grades
AWS	A5.28: ER 80S-B6		
EN	21952-A: W CrMo5 Si		

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	0.50	0.40	≤ 0.020	≤ 0.020	5.70	-	0.60	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 760°C x 1h	≥ 470	≥ 590	≥ 20	≥ 60	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

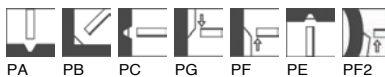
12CrMo19-5, X12CrMo5; A182 Gr. F5, A199 Gr. T5, A213 Gr.T5, A335 Gr.P5
A 336 Cl. F5, A 369 Gr. FP5, A 387 Gr.5, Cl 1 and 2

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

CARBOROD KV7

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai resistenti al creep contenenti il 9% di cromo e 1% di molibdeno tipo P/T9. Ottime caratteristiche meccaniche.

Classification

AWS	A5.28: ER80S-B8
EN	12070: W CrMo9

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.06	1	0.50	≤ 0.025	≤ 0.025	9	-	1	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 750°C x 1h	≥ 470	≥ 590	≥ 20	≥ 60	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

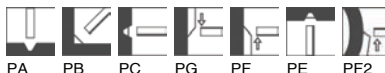
SA 182 - P9
SA 387 - Gr9

Storage

Keep dry and avoid condensation.

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

CARBOROD KV7M

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai resistenti al creep tipo P91. Buone caratteristiche meccaniche.

Classification

AWS	A5.28: ER 90S-B9
EN	21952-A: W CrMo91

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.09	0.50	0.20	≤ 0.010	≤ 0.010	9	0.60	0.90	0.06	0.20	0.04	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 760°C x 1h	≥ 415	≥ 620	≥ 16	≥ 65	
PWHT 760°C x 2h	≥ 415	≥ 585	≥ 17	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

SA 355 - P 91

SA 387 - Gr 91

Storage

Keep dry and avoid condensation.

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

CARBOROD Ni1

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai debolmente legati al 1% Ni e a grana fine per applicazione a bassa temperatura.

Carbolif Ni1 is a TIG rod suitable for welding low alloy, 1% Ni and fine grain steels for low temperature applications.

Classification	
AWS	A5.28: ER 80S-Ni1
EN	1668: W 46 6 M G3Ni1

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	1	0.60	≤ 0.020	≤ 0.020	-	1	0.10	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -60°C	Hardness
As Welded	≥ 470	550-680	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

S(P)235-S(P)460, GP240-GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 Kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2		
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Further forms of delivery on request.

CARBOROD Ni2

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai debolmente legati al 2% Ni e per applicazioni a bassa temperatura. Ottime caratteristiche meccaniche sia in condizione as-welded che dopo trattamento termico di distensione.

Carborod Ni 2 is a TIG rod suitable for welding low alloy and 2% Ni steels for low temperature applications. Excellent mechanical properties both in the as-welded and stress relieved conditions.

Classification	
AWS	A5.28: ER 80S-Ni2
EN	1668: W 46 6 M W2Ni2

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	1.10	0.50	≤ 0.020	≤ 0.020	-	2.50	-	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -60°C	Hardness
As Welded	≥ 470	550-680	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

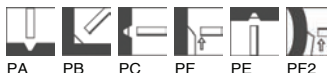
S(P)275-S(P)420

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2		
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Further forms of delivery on request.

CARBOROD NiMo1

TIG Rods C-Mn steels and low-alloy steels

Bacchetta TIG per la saldatura di acciai ad elevato limite elastico quali ad esempio T1 -HY 80 o S(P)460-S(P)620

Carborod NiMo1 is an alloyed Ni-Mo TIG rod suitable for welding high tensile strength steels such as T1 -HY 80. Excellent mechanical properties. Low heat inputs are recommended to obtain optimum joint performance.

Classification		Approvals	Grades
AWS	A5.18: ER 90S-G		
EN	1668: W Mn3Ni1Mo		

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.08	1.80	0.60	≤ 0.015	≤ 0.018	≤ 0.15	1	0.40	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -40°C	Hardness
As Welded	≥ 620	700-890	≥ 18	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

S(P)460-S(P)620

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	1,2	1,6	2,0	2,4	3,2

Further forms of delivery on request.

OE ALCROMO W225

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai 2.25% Cr 1% Mo per la saldatura di acciai resistenti al creep e dove sia richiesto lo Step Cooling. X factor <15ppm e J factor <150ppm

Classification

AWS A5.28: ER 90S

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.12	0.60	0.20	≤ 0.010	≤ 0.010	2.30	-	0.90	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 690°C x 2h	≥ 550	≥ 650	≥ 20	≥ 54	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

SA 182 P 22

SA 387 Gr 22

SA 508 Gr 22 Cl 3

SA 542 Tp B Cl 4

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	1,2	2,4				
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Further forms of delivery on request.

OE ALCROMO W225V

TIG Rods C-Mn steels and low-alloy steels

Barretta TIG per la saldatura di acciai 2.25%Cr, 1%Mo, 0,25% V resistenti al creep e dove sia richiesto lo Step Cooling. X factor <15ppm e J factor <150ppm

Classification

AWS A5.28: ER 90S-G

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.12	0.50	0.20	≤ 0.010	≤ 0.010	2.40	-	0.90	-	0.25	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -29°C	Hardness
PWHT 710°C x 8h	≥ 550	550-750	≥ 18	≥ 54	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

12 Cr Mo V 910

SA 336 F 22 V

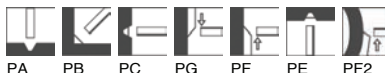
SA 541 Gr 22 V

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	1,2	2,4				

Further forms of delivery on request.

INERTROD 307

TIG Rods Stainless and Heat resistant steels

Filo inox per la saldatura di acciai dissimili, acciai da bonifica, al 13% Mn, acciai al Cr, acciai da corazza a balistici. Deposito con notevoli caratteristiche meccaniche e di resistenza all'usura. Indicato anche per l'esecuzione di strati cuscinetto e strati intermedi di placature.

Inertrod 307 is a stainless TIG rod suitable for welding dissimilar steels, hardening and tempering steels, 13% Mn steels, Cr steels and ballistic steels. Good mechanical properties and wear resistance. Inertrod 307 is also used for buffer layers.

Classification	
AWS	A5.9: ER 307 (approx)
EN	12072: G 18 8 Mn

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.10	7	0.80	≤ 0.030	≤ 0.030	19	9	-	-	-	-	≤ 5

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 420	≥ 590	≥ 30	≥ 50	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

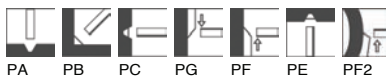
Armour plate; Dissimilar Steels
X120Mn12 (1.3401); 1.4370

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	2,4					
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Further forms of delivery on request.

INERTROD 308 L

TIG Rods Stainless and Heat resistant steels

Barretta TIG inox del tipo ER 308L indicata per la saldatura di acciai inox austenitici del tipo AISI 304 e 308. Ottima resistenza meccanica e alla corrosione. Elevata resistenza alla fessurazione.

Inertrod 308L is a stainless TIG rod similar in composition to ER 308L suitable for welding austenitic stainless steels such as AISI 304 and 304L. Excellent corrosion resistance and mechanical properties.

Classification	
AWS	A5.9: ER 308L
EN	12072: W 19 9 L

Approvals	Grades
DB	
MMI	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.02	1.80	0.45	≤ 0.025	≤ 0.020	20	10	0.20	-	-	-	5-10

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -196°C	Hardness
As Welded	≥ 350	≥ 520	≥ 35	≥ 60	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials


1.4541 (X6CrNiTi18-10); 1.4301 (X4CrNi18-10); 1.4311 (X2CrNiN18-10)

AISI 304 - 304L - 302

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-							
							
PA	PB	PC	PG	PF	PE	PG2	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,0	1,2	1,6	2,0	2,4	3,2

Further forms of delivery on request.

INERTROD 308 L Si

TIG Rods Stainless and Heat resistant steels

Barretta TIG inox del tipo R308L indicata per la saldatura di acciai inox tipo AISI 304 e 308. Il contenuto di Si conferisce una migliore caratteristica di saldabilità ed estetica.

Inertrod 308LSi is a stainless TIG rod similar in composition to ER 308LSi suitable for welding austenitic stainless steels such as AISI 304.

Classification	
AWS	A5.9: R308LSi
EN	12072: W 19.9 L Si

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.025	1.80	0.85	0.025	0.020	20	10.20	0.20	-	0.20	-	5-10

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 520	≥ 35	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

1.4541 (X6CrNiTi18-10); 1.4301 (X4CrNi18-10); 1.4311 (X2CrNi18-10)

AISI 304 - 304L - 302

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,4	3,2			
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Further forms of delivery on request.

INERTROD 308 H

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciai inox austenitici del tipo AISI 304H. Ottima resistenza meccanica.

Inertrod 308H is a stainless TIG rod of similar composition to ER 308H suitable for welding austenitic stainless steels such as AISI 304H. Excellent mechanical properties.

Classification	
AWS	A5.9: ER 308H
EN	12072: W 19.9 H

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.06	1.90	0.50	≤ 0.030	≤ 0.020	20	10.50	-	-	-	-	5-10

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 550	≥ 35	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

AISI 304H; 1.4948 (X6CrNi18-10); 1.4310 (X10CrNi18-8)

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-							
							
PA	PB	PC	PG	PF	PE	PG2	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

INERTROD 347

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciai inox stabilizzati. La presenza dello stabilizzante migliora le caratteristiche di resistenza alla corrosione a temperatura. Trova il suo campo d'impiego nella saldatura di AISI 347 e 321 in prima passata o ripristini di placcatura.

Inertrod 347 is a stainless TIG rod suitable for welding stabilized austenitic stainless steels such as AISI 321 and 347. The Nb addition considerably improves the oxidation resistance of the weld deposit.

Classification	
AWS	A5.9: ER 347
EN	12072: G 19 9Nb

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.06	1.60	0.45	≤ 0.030	≤ 0.030	19.50	10	-	0.80	-	-	5-10

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 400	≥ 550	≥ 30	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials




1.4541 (X6CrNiTi18-10); 1.4301 (X4CrNi18-10); 1.4550 (X6CrNiNb18-10); 1.4551

AISI 347 - 321

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-							
							
PA	PB	PC	PG	PF	PE	PG2	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,0	1,2	1,6	2,0	2,4	3,2
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Further forms of delivery on request.

INERTROD 316 L

TIG Rods Stainless and Heat resistant steels

Barretta in acciaio inox del tipo AISI 316L indicato per la saldatura di acciai inox con analoga composizione chimica. Buone caratteristiche di resistenza alla corrosione trova il suo naturale campo di applicazione nell'industria chimica e petrolchimica.

Inertrod 316L is a stainless TIG rod conforming to ER 316L with 0.03% C maximum. Excellent mechanical and corrosion resistance, suitable for the welding or surfacing of stainless steels having similar chemical analyses.

Classification	
AWS	A5.9: ER 316L
EN	12072: W 19 12 3L

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.02	1.40	0.45	≤ 0.025	≤ 0.020	19	12.50	2.60	-	-	-	5-10

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 510	≥ 30	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

1.4401 (X4CrNiMo17-12-2), 1.4435 (X2CrNiMo18-14-3)

1.4571 (X6CrNiMoTi17-12-2), 1.4583 (X10CrNiMoNb18-12)

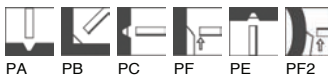
AISI 316L

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,0	1,2	1,6	2,0	2,4	3,2
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Further forms of delivery on request.

INERTROD 316 L Si

TIG Rods Stainless and Heat resistant steels

Barretta TIG inox del tipo R316L indicata per la saldatura di acciai inox tipo AISI 316. Il contenuto di Si conferisce una migliore caratteristica di saldabilità ed estetica.

Inertrod 316LSi is a stainless TIG rod conforming to ER 316LSi with C 0.03% max and Si 0,85 %. Excellent mechanical properties and resistance to chemical corrosion, suitable for welding or surfacing stainless steels having a similar chemical analysis. Excellent bead appearance.

Classification	
AWS	A5.9: ER 316L Si
EN	12072: W 19 12 3 L Si

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.02	1.40	0.85	0.025	0.020	19	12.50	2.60	-	-	-	5-10

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) +20°C	Hardness
As Welded	≥ 350	≥ 510	≥ 30	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

1.4401 (X4CrNiMo17-12-2), 1.4435 (X2CrNiMo18-14-3)
1.4571 (X6CrNiMoTi17-12-2), 1.4583 (X10CrNiMoNb18-12)
AISI 316L

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	1,2	1,6	2,0	2,4	3,2	
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Further forms of delivery on request.

INERTROD 318 Si

TIG Rods Stainless and Heat resistant steels

Barretta in acciaio inox del tipo AISI 318. La presenza di stabilizzanti migliora la resistenza all'ossidazione del deposito.

Inertrod 318Si is a stainless TIG rod suitable for welding stabilised austenitic steels such as AISI 318. The niobium addition considerably improves the oxidation resistance of the weld deposit.

Classification	
AWS	A5.9: ER 318 (similar)
EN	12072: W 19 12 3 Nb Si

Approvals	Grades
DB	
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.07	1.75	0.85	≤ 0.020	≤ 0.020	19	12.60	2.60	0.70	-	-	3-12

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 550	≥ 25	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

1.4571 (X6CrNiMoTi17-12-2) - 1.4401 (X4CrNiMo17-12-2)

1.4580 (X6CrNiMoNb17-12-2) - 1.4408 (GX5CrNiMo19-11)

1.4581 (GX5CrNiMoNb19-10) - 1.4436 (X4CrNiMo17-13-3)

1.4583 (X10CrNiMoNb18-12)

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4		
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Further forms of delivery on request.

INERTROD 309 L

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciai inox austenitici tipo AISI 309. Per le sue particolari caratteristiche chimico meccaniche viene impiegata per la saldatura anche di acciai dissimili inox ferro per sottostrati di riporti. Buone caratteristiche meccaniche di resistenza all'ossidazione a caldo.

Inertrod 309L is a stainless TIG rod conforming to ER 309L for welding austenitic stainless steels such as AISI 309. It is also used to weld dissimilar steels and for buffer layers. Excellent high temperature oxidation resistance.

Classification	
AWS	A5.9: ER 309L
EN	12072: W 23 12L

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.02	1.80	0.45	≤ 0.030	≤ 0.020	24	13	-	-	-	-	10-20

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 520	≥ 30	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

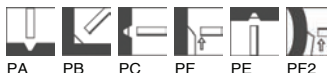
A312 TP309S; carbon steel to stainless steels joint

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,2	1,6	2,0	2,4	3,2

Further forms of delivery on request.

INERTROD 309 L Mo

TIG Rods Stainless and Heat resistant steels

Barretta TIG indicata per la saldatura di acciai inox austenitici tipo AISI 309. Basso contenuto di carbonio e alto contenuto di Mo.

Inertrod 309LMo is a stainless TIG rod with 25% Cr 12% Ni low C and high Mo. Suitable for welding austenitic stainless steels such as AISI 309. Inertrod 309LMo is also used for welding dissimilar steels and for buffer layers.

Classification		Approvals	Grades
AWS	A5.9: ER 309L Mo		
EN	12070: W 23 12 2 L		

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.03	1.60	0.45	≤ 0.030	≤ 0.020	22	15	2.70	-	-	-	10-20

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 550	≥ 30	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

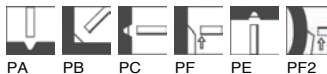
Cladding of carbon steel and low alloy steel

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4			
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Further forms of delivery on request.

INERTROD 310

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciai inox Completamente austenitici del tipo AISI 310 o similari. Il deposito completamente austenitico conferisce grandi qualità di resistenza alla corrosione ad alte temperature, può essere impiegata anche per la saldatura o placcatura di acciai dissimili o al carbonio.

Inertrod 310 is a stainless TIG rod conforming to ER 310 with 25% Cr and 20% Ni. Suitable for welding steels with similar chemical compositions or dissimilar steels. The weld deposit is fully austenitic. Excellent high temperature corrosion resistance.

Classification

AWS	A5.9: ER 310
EN	12072: W 25 20

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.12	1.80	0.60	≤ 0.030	≤ 0.020	26	21	0.30	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 350	≥ 550	≥ 30	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

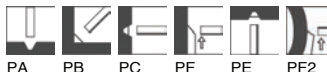
AISI 310; 1.4845 (X8CrNi25-21); 1.4841 (X15CrNiSi25-21); 1.4828 (X15CrNiSi20-12)

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2		
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Further forms of delivery on request.

INERTROD 312

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciai inox di eguale composizione chimica e di acciai difficilmente saldabili quali acciai al C al Mn al Cr acciai da corazza e balistici. La notevole elasticità del deposito e la grande resistenza alle fessurazioni rendono l'impiego di tale bacchetta universale.

Inertrod 312 is a stainless TIG rod suitable for welding or surfacing difficult to weld steels. Suitable for welding buffer layers. The excellent mechanical properties and the notch toughness make Inertrod 312 suitable for a wide range of applications.

Classification	
AWS	A5.9: ER 312
EN	12072: W 29 9

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.10	1.80	0.40	≤ 0.030	≤ 0.020	29	9	-	-	-	-	12-20

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
As Welded	≥ 450	≥ 650	≥ 22	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

Dissimilar and difficult to weld steels

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4		
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Further forms of delivery on request.

INERTROD 904 L

TIG Rods Stainless and Heat resistant steels

Bacchetta TIG per la saldatura di acciai tipo AISI 904L altamente legati, con basso contenuto di carbonio. Ottima resistenza alla corrosione in miscele solforose e cloridriche. Buona resistenza alla corrosione intergranulare.

Inertrod 904L is a TIG rod for the welding of stainless steels type AISI 904L with low carbon content. Very good resistance to intergranular and pitting corrosion.

Classification	
AWS	A5.9: ER 385 L
EN	12072: W 20 25 5 Cu L

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.025	1.90	0.40	≤ 0.020	≤ 0.020	20	25	4.50	-	1.50	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -70°C	Hardness
As Welded	≥ 320	≥ 520	≥ 30	≥ 100	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

1.4519

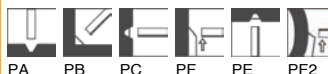
URANUS B6; AISI 904L; 1.4539 (X1NiCrMoCu25-20-5); 1.4439 (X2CrNiMoN17-13-5); 1.4537 (X1CrNiMoCuN25-25-5)

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4			
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Further forms of delivery on request.

INERTROD 410L

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciaio con 12%Cr tipo AISI 410.

Inertrod 410L is a TIG rod suitable for welding 12% Cr steels (AISI 410).

Classification	
AWS	A5.9: ER 410
EN	12072: W 13L

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.03	0.40	0.50	≤ 0.030	≤ 0.030	13.50	-	-	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
PWHT 750°C x 1h	≥ 350	≥ 450	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

1.4000 (X6Cr13); 1.4006 (X12Cr13)

AISI 410

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-							
							
PA	PB	PC	PG	PF	PE	PG2	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4			

Further forms of delivery on request.

INERTROD 410 NiMo

TIG Rods Stainless and Heat resistant steels

Barretta per saldatura di acciai serie 410 Ni Mo, acciai tipo autotemperante

Inertrod 410NiMo is a TIG rod suitable for welding AISI 410 NiMo. These are self-hardening steels and usually require pre-heating and stress relieving treatments in order to obtain adequate joint ductility.

Classification		Approvals	Grades
AWS	A 5.9: ER 410 Ni Mo		
EN	12072: W 13 4		

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.05	0.60	0.50	≤ 0.030	≤ 0.030	12.50	4	0.70	-	-	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) 20°C	Hardness
PWHT 620°C x 1h	≥ 550	≥ 760	≥ 20	≥ 47	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

ASTM C69NM; G-X5CrNi 13-4; Z6 CND 1304 M

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-							
							
PA	PB	PC	PG	PF	PE	PG2	PF2

Packaging data:

Diameters (L: 1000 mm)	1,6	2,0	2,4			

Further forms of delivery on request.

INERTROD 22 9 3

TIG Rods Stainless and Heat resistant steels

Barretta TIG per la saldatura di acciai bifasici tipo Duplex. La ottima resistenza alla corrosione e le caratteristiche meccaniche del deposito dipendono molto dalla tecnica di saldatura. Temperatura di esercizio fino a 280°C.

Inertrod 22 9 3 is a TIG rod suitable for welding duplex stainless steels. The excellent corrosion resistance and the weld metal mechanical properties are welding procedure dependant.

Classification	
AWS	A5.9: ER 2209
EN	12072: W 22 9 3NL

Approvals	Grades
TÜV	

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.02	1.70	0.50	≤ 0.030	≤ 0.020	23	9	3	-	-	0.15	30-65

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -50°C	Hardness
As Welded	≥ 450	≥ 600	≥ 26	≥ 100	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials


1.4462 (X2CrNiMoN22-5-3)

UNS S31803 - S31500 - S31200 - S32304

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-							
							
PA	PB	PC	PG	PF	PE	PG2	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4			
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Further forms of delivery on request.

INERTROD 25 10 4

TIG Rods Stainless and Heat resistant steels

Bacchetta TIG per la saldatura di Acciai SuperDuplex secondo UNS 32520, UNS 32520 UNS 32750 UNS 32760. Applicazione negli apparecchi in pressione. Per ottenere depositi esenti da difetti. L'apporto termico deve essere compreso tra 0,4 – 1,4 kJ/mm.

Inertrod 25 10 4 is a TIG rod for welding super duplex stainless steels (UNS 32520, UNS 32520 UNS 32750 UNS 32760). The welding of pressure vessels is a typical application. The heat input should be in the range within 0,4 – 1,4 kJ/mm.

Classification

EN 12072: 25 9 4 L

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Cu	N	Ferrite
0.03	1	0.50	≤ 0.020	≤ 0.020	25	9.50	4	-	-	0.22	35-70

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -30°C	Hardness
As Welded	≥ 550	≥ 620	≥ 18	≥ 30	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

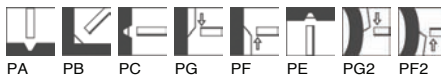
SAF 2507; Uranus 47N; UNS S32750; ASTM A182 F53

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	2,4					
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Further forms of delivery on request.

TIG Rods Nickel and Copper alloys

Bacchetta TIG per saldatura di Nickel 99.6, LC-Nickel99.2, Nickel 99.2, Nickel-Mangan. Applicabile anche per saldatura di acciai placcati in Nickel puro sia per esplosione che per laminazione. E' altresì possibile la placcatura di acciai al carbonio.

Nirod Ni1 is a TIG rod suitable for welding nickel alloys with similar chemical analysis and for weld overlay. The weld deposit has a good appearance and excellent resistance to chemical corrosion.

Classification	
AWS	A 5.14: ER Ni-1
EN ISO	18274: S Ni 2061 (NiTi3)

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	W	Cu
0.10	1	0.70	≤ 0.030	≤ 0.015	-	≥ 93	-	-	0.90	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	≥ 280	≥ 380	≥ 38		

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

2.4155

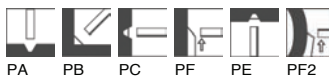
Buffer layers for welding Ni or Cu alloys to steels

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

TIG Rods Nickel and Copper alloys

Barretta per la saldatura GTAW di leghe inconel 600 o incoloy 800. La barretta ETC TIG 82 è anche indicata nel caso di saldature di acciai difficilmente saldabili e dissimili. Ottima resistenza meccanica ed alla corrosione.

Nirod 600 is a nickel alloy TIG rod for welding Inconel 600 or Incoloy 800 alloys. Nirod 600 is also suitable for welding dissimilar or difficult to weld steels. Excellent mechanical properties and corrosion resistance.

Classification	
AWS	A5.14: ER NiCr 3
EN	18274: S Ni 6082

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	W	Cu
0.05	3	0.30	≤ 0.030	≤ 0.015	20	67	-	2	2	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -196°C	Hardness
As Welded	≥ 380	≥ 550	≥ 25	≥ 55	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials







2.4816; 1.4876; 1.4958

UNS N06600; UNS N08800; UNS N08810

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-					
					
PA	PB	PC	PF	PE	PF2

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,2	1,6	2,0	2,4		
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Further forms of delivery on request.

TIG Rods Nickel and Copper alloys

Barretta TIG a struttura austenitica, impiego per saldature criogeniche e acciai al 9% Ni, grazie alla sua buona tenuta alle alte temperature può essere utilizzato su tutte le installazioni soggette a trattamento termico. Buona resistenza alla corrosione intercristallina.

Nirod 625 is a nickel alloy TIG rod, for use in cryogenic welding and the welding of 9% Ni steels. The good resistance to high temperatures makes Nirod 625 suitable for the welding of components which will undergo heat treatments. Good resistance to intercrystalline corrosion.

Classification

AWS A5.14: ER NiCrMo-3

Approvals

TÜV

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	W	Cu
0.10	-	0.30	≤ 0.020	≤ 0.015	21	60	9	3.50	3	-	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -196°C	Hardness
As Welded	≥ 440	≥ 760	≥ 35	≥ 55	

Gas test: Acc. To EN 14175: I1 (Arcal1)

Shielding Gas: Acc. To EN 14175: I1 (Arcal1)

Materials

2.4856; 2.4839

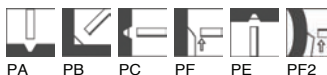
UNS N06625; UNS N08825

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data: Tube 5 kg

Diameters (L: 1000 mm)	1,2	1,6	2,0	2,4		
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Further forms of delivery on request.

NIROD C276



TIG Rods Nickel and Copper alloys

Bacchetta TIG per la saldatura di acciai al 9% di nichel o leghe di nichel tipo Inconel C276.

Classification

AWS A5.14: ER NiCrMo-4

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	W	Cu
≤ 0.02	≤ 1	≤ 0.08	≤ 0.030	≤ 0.025	14.50	Rem	15-17	-	4-7	3-4.50	≤ 0.50

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J) -196°C	Hardness
As Welded	≥ 490	≥ 700		≥ 55	

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Storage

Current condition and welding position

DC-

Packaging data: Tube 5 kg

Diameters (L: 1000 mm)

Further forms of delivery on request.

NIROD NiCu7

TIG Rods Nickel and Copper alloys

Barrette per la saldatura GTAW di leghe con uguale composizione chimica. Buona estetica e ottima resistenza alla corrosione in presenza di ambienti salini. Applicazione tipo dissalatori per leghe tipo MONEL.

Nirod NiCu7 is a nickel alloy TIG rod suitable for welding alloys with similar chemical analyses. Good bead appearance and excellent corrosion resistance in saline solutions. Suitable for the fabrication of desalination plant using MONEL type alloy.

Classification		Approvals	Grades
AWS	A5.14: ER NiCu 7		
EN ISO	S Ni 4060		

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	W	Cu
0.10	3	1	≤ 0.020	≤ 0.015	-	Rem	-	-	1	-	30

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	≥ 350	≥ 480	≥ 30		

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

2.4360 (NiCu30Fe); 2.4375 (NiCu30Al)

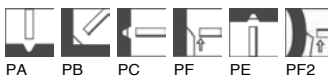
UNS N04400; UNS N 05500

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

OE TIG CuNi 70-30

TIG Rods Nickel and Copper alloys

Barretta TIG indicata per la saldatura di leghe con uguale composizione chimica. Buona estetica ed ottime caratteristiche del deposito. Ottima resistenza alla corrosione da agenti chimici ed in ambienti marini.

Classification

AWS A5.7: ER CuNi

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	Cu	Sn
0.05	1	0.25	-	-	-	30	-	-	0.50	Rem	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	-	≥ 345	≥ 20		

Gas test: Acc. To EN 14175: I1(Arcal1)

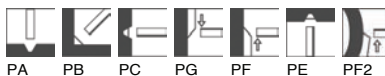
Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data:

Diameters (L: 1000 mm)	2,0	2,4				

Further forms of delivery on request.

OE TIG CuNi 90-10

TIG Rods Nickel and Copper alloys

Barretta TIG per la saldatura di leghe di equivalente composizione chimica. Ottima resistenza alla corrosione in ambienti marini.

Classification

DIN 1733 Part.1 n° 2.0873

Approvals

Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	Fe	Cu	Sn
0.05	1	0.20	-	-	-	10	-	-	≤ 1.50	Rem	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded		≥ >380			

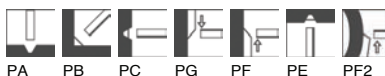
Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Storage

Keep dry and avoid condensation

Current condition and welding position



Packaging data:

Diameters (L: 1000 mm)	2,0	2,4				
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Further forms of delivery on request.

ALUROD Al 99,5 Ti

TIG Rods Aluminum alloys

Barretta che deposita alluminio puro al 99,5%. Adatto per la saldatura con procedimento TIG alluminio al 99,5-99,8%. Buone caratteristiche di saldabilità e permeabilità magnetica. Ottima resistenza alla corrosione.

Alurod Al 99,5 Ti is a TIG rod depositing 99,5% pure Al. Suitable for welding Al and pure Al alloys. Good mechanical properties and magnetic permeability. Excellent chemical corrosion resistance.

Classification	
AWS	A5.10: ER 1100
Wr.	3.0259

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Zn	Ti	Mg	Fe	Cu	Al
-	0.04	0.30	-	-	-	-	0.05	-	0.40	0.05	Rem

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	≥ 20	≥ 65	≥ 35		

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

Al 99,5 ;Al 99; Al 99,9 Mg 0,5; AlMg 0,5

Storage

Keep dry and avoid condensation

Current condition and welding position

AC					
					
PA	PB	PC	PF	PE	PF2

Packaging data: Box 5 kg

Diameters (L: 1000 mm)	2,0	2,4	3,2	4,0		
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Further forms of delivery on request.

ALUROD AISi 5

TIG Rods Aluminum alloys

Barretta TIG che deposita una lega di alluminio al 5%Si. E' adatto per la saldatura di leghe Anticorodal 163 e 11.

Alurod AISi5 is a TIG rod for the welding of aluminium and aluminium alloys with a silicon content up to 7%. Suitable for Al-Mg-Si alloys series 6000 and for dissimilar welding applications such as 6000/1000 or 6000/3000.

Classification		Approvals	Grades
AWS	A5.10: ER 4043		

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Zn	Ti	Mg	Fe	Cu	Al
-	0.04	5	-	-	-	-	0.10	-	0.40	0.30	Rem

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	≥ 40	≥ 120	≥ 8		

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

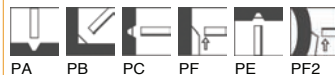
Al-Mg-Si and Al-Mg alloys with 2.5% Mg max. Al-Mn-Cu - AlSi cast

Storage

Keep dry and avoid condensation

Current condition and welding position

AC



Packaging data: Box 5 kg

Diameters (L: 1000 mm)	2,0	2,4	3,2	4,0		

Further forms of delivery on request.

ALUROD AlMg 5

TIG Rods Aluminum alloys

Barretta che deposita una lega di alluminio al 5% di Magnesio. Indicato per la saldatura di leghe tipo Peraluman ed Anticoral. Ottime caratteristiche meccaniche.

Alurod AlMg5 is a TIG rod for the welding of aluminium and aluminium alloys with a magnesium content up to 5%. Suitable for welding of all commercial aluminium alloys. Good mechanical properties and high resistance to corrosion including marine corrosion.

Classification	
AWS	A5.10: ER 5356
EN ISO	18273: S Al 5356

Approvals	Grades

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Zn	Ti	Mg	Fe	Cu	Al
-	0.10	0.20	-	-	0.10	-	0.10	5	0.30	0.10	Rem

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	≥ 110	≥ 240	≥ 17		

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

Al Mg 1SiCu, Al Mg Si 0,7;






Al Mg 3, Al Mg 5, Al Zn 4,5 Mg 1;

G-Al Mg 3Si; G-Al Mg 5Si

Storage

Keep dry and avoid condensation

Current condition and welding position

AC					
					
PA	PB	PC	PF	PE	PF2

Packaging data: Box 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2	4,0

Further forms of delivery on request.

ALUROD AlMg 4,5 Mn

TIG Rods Aluminum alloys

Barretta TIG che deposita una lega con 4,5 %Mg. Ottime caratteristiche meccaniche.

Alurod AlMg 4,5 Mn is a TIG rod which deposits a 4,5% Mg aluminum alloy with high tensile strength requirements. Good mechanical properties.

Classification	
AWS	A5.10: ER 5183
EN	18273: S Al 5183

Approvals	Grades
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Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Zn	Ti	Mg	Fe	Cu	Al
-	0.80	0.25	-	-	0.10	-	0.10	4.50	0.30	0.10	Rem

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)	Impact Energy ISO - V (J)	Hardness
As Welded	≥ 125	≥ 275	≥ 17		

Gas test: Acc. To EN 14175: I1(Arcal1)

Shielding Gas: Acc. To EN 14175: I1(Arcal1)

Materials

Al Mg 3, Al Mg 5, Al Mg Mn, Al Zn 4,5 Mg 1

G-Al Mg 3 Si; G-Al Mg 5 Si; G-Al Mg 10;

Storage

Keep dry and avoid condensation

Current condition and welding position

AC



PA PB PC PF PE PF2

Packaging data: Box 5 kg

Diameters (L: 1000 mm)	1,6	2,0	2,4	3,2	4,0
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Further forms of delivery on request.