

Eczacıbaşı - Lincoln Electric

ASKAYNAK® Products



*MIG Wires and
TIG Rods for
Welding of
Stainless Steels*

*MIG Wires and
TIG Rods for
Welding of
Aluminium Alloys*

*Flux-Cored Wires for
Welding of
Un-Alloy Steels*

*Carbon Arc Electrodes
for Cutting and Gouging
Applications*

*Tungsten Electrodes
for TIG Welding*



ASKAYNAK®

The Future Starts with a Spark

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BOLTS & TOOLS CENTER BTGO

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AS MIG 307Si



MIG Wire for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ~ ER307
ISO 14343-A : ~ G 18 8 Mn

General Description

Solid wire with 7% Mn for welding steels with difficult weldability such as armour plates and austenitic high Mn-steels.
Often used as a buffer layer in hardfacing applications.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | P+S |
|------|------|----|----|----|---------|
| 0.08 | 0.80 | 7 | 19 | 9 | < 0.035 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 420 N/mm²
Tensile Strength : 620 N/mm²
Elongation (L=5d) : 40 %
Impact ISO-V : 80 J (+20°C)

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : M13 - Ar + % 1.5 - 3 O₂
M12 - Ar + % 1 - 5 CO₂

Materials to be Welded

Various steel grades such as; armour plates, hardenable steels including steels difficult to weld, non-magnetic steels, work hardening austenitic manganese steels and dissimilar joints (CMn-steels to stainless steels).

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Spool Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|--------------|
| MIG Wire | - | - | X | - | - | - | - | 12.5 kg |

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.



AS MIG 308LSi

MIG Wire for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ER308LSi
ISO 14343-A : G 19 9 LSi

General Description

Solid wire with extra low carbon for welding austenitic CrNi-steels.
With increased silicon for improved wettability.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | Mo | P+S |
|--------|------|------|----|----|------|---------|
| < 0.03 | 0.85 | 1.70 | 20 | 10 | 0.15 | < 0.035 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 390 N/mm²
Tensile Strength : 590 N/mm²
Elongation (L=5d) : 40 %
Impact ISO-V : 120 J (+20°C)

Approvals

ABS (ER308LSi)
GOST, SEPRO

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : M13 - Ar + % 1.5 - 3 O₂
M12 - Ar + % 1 - 5 CO₂

Materials to be Welded

| | EN 10088-1/-2 | EN 10213-4 | Mat. Nr. |
|--|-----------------|-------------------|----------|
| Extra Low Carbon (C < %0.03) | X2 CrNi 19 11 | | 1.4306 |
| | X2 CrNiN 18 10 | | 1.4311 |
| Medium Carbon (C > %0.03) | X4 CrNi 18 10 | | 1.4301 |
| | | G-X5 CrNi 19 10 | 1.4308 |
| Ti/Nb Stabilized | X6 CrNiTi 18 10 | | 1.4541 |
| | X6 CrNiNb 18 10 | | 1.4550 |
| | | G-X5 CrNiNb 19 10 | 1.4552 |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Spool Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|--------------|
| MIG Wire | X | X | X | - | - | - | - | 12.5 kg |

AS MIG 309LSi



MIG Wire for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ER309LSi
ISO 14343-A : G 23 12 LSi

General Description

Solid wire for welding stainless steel to carbon steel.
With increased silicon for improved wettability.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | Mo | P+S |
|--------|------|------|----|----|------|---------|
| < 0.03 | 0.85 | 1.70 | 24 | 13 | 0.15 | < 0.035 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 420 N/mm²
Tensile Strength : 600 N/mm²
Elongation (L=5d) : 35 %
Impact ISO-V : 120 J (+20°C)

GOST

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : M13 - Ar + % 1.5 - 3 O₂
M12 - Ar + % 1 - 5 CO₂

Materials to be Welded

| | EN 10088-1/-2 | Mat. Nr. |
|---------------------------------------|----------------|----------|
| Corrosion resistant cladsteels | X2 CrNiN 18 10 | 1.4311 |
| | X2 CrNi 19 11 | 1.4306 |
| | X4 CrNi 18 10 | 1.4301 |

Dissimilar metals (mild and low alloyed steel to stainless steel)

Build-up welding on mild and low alloyed steel

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Spool Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|--------------|
| MIG Wire | X | X | X | - | - | - | - | 12.5 kg |

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AS MIG 316LSi



MIG Wire for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ER316LSi
ISO 14343-A : G 19 12 3 LSi

General Description

Solid wire with extra low carbon for welding austenitic CrNiMo-steels.
With increased silicon for improved wettability.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | Mo | P+S |
|--------|------|------|------|------|------|---------|
| < 0.03 | 0.85 | 1.70 | 18.5 | 12.5 | 2.75 | < 0.035 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 410 N/mm²
Tensile Strength : 640 N/mm²
Elongation (L=5d) : 35 %
Impact ISO-V : 150 J (+20°C)

Approvals

ABS (ER316LSi)
GOST, SEPRO

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : M13 - Ar + % 1.5 - 3 O₂
M12 - Ar + % 1 - 5 CO₂

Materials to be Welded

| | EN 10088-1/-2 | EN 10213-4 | Mat. Nr. |
|--|---------------------|-------------------|----------|
| Extra Low Carbon (C < %0.03) | X2 CrNiMo 17 12 2 | | 1.4404 |
| | X2 CrNiMo 18 14 3 | | 1.4435 |
| | X2 CrNiMoN 17 11 2 | | 1.4406 |
| | X2 CrNiMoN 17 13 3 | | 1.4429 |
| Medium Carbon (C > %0.03) | X4 CrNiMo 17 12 2 | | 1.4401 |
| | X4 CrNiMo 17 13 3 | | 1.4436 |
| | | G-X5 CrNiMo 19 11 | 1.4408 |
| Ti/Nb Stabilized | X6 CrNiMoTi 17 12 2 | | 1.4571 |
| | X6 CrNiMoNb 17 12 2 | | 1.4580 |
| | X6 CrNiNb 18 10 | | 1.4550 |
| | | G-X5 CrNiNb 19 10 | 1.4552 |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Spool Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|--------------|
| MIG Wire | X | X | X | - | - | - | - | 12.5 kg |

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AS TIG 308L



TIG Rod for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ER308L
ISO 14343-A : W 19 9 L

General Description

Solid rod with extra low carbon for welding austenitic CrNi-steels.
High resistance to intergranular corrosion and oxidizing environments.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | Mo | P+S |
|--------|------|------|----|----|------|---------|
| < 0.03 | 0.45 | 1.70 | 20 | 10 | 0.15 | < 0.035 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 380 N/mm²
Tensile Strength : 570 N/mm²
Elongation (L=5d) : 40 %
Impact ISO-V : 100 J (+20°C)

Approvals

ABS (ER308L)
GOST, SEPRO

Shielding Gases (acc. ISO 14175 and EN 439)

TIG : I1 - Ar (%100)

Materials to be Welded

| | EN 10088-1/-2 | EN 10213-4 | Mat. Nr. |
|--|-----------------|-------------------|----------|
| Extra Low Carbon (C < %0.03) | X2 CrNi 19 11 | | 1.4306 |
| | X2 CrNiN 18 10 | | 1.4311 |
| Medium Carbon (C > %0.03) | X4 CrNi 18 10 | | 1.4301 |
| | | G-X5 CrNi 19 10 | 1.4308 |
| Ti/Nb Stabilized | X6 CrNiTi 18 10 | | 1.4541 |
| | X6 CrNiNb 18 10 | | 1.4550 |
| | | G-X5 CrNiNb 19 10 | 1.4552 |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Tube Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------|
| TIG Rod | - | - | - | X | X | X | X | 5 kg |

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.

AS TIG 309L



TIG Rod for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ER309L
ISO 14343-A : W 23 12 L

General Description

Solid rod for welding stainless steel to carbon steel.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | Mo | P+S |
|--------|------|------|----|----|------|---------|
| < 0.03 | 0.45 | 1.70 | 24 | 13 | 0.15 | < 0.035 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 410 N/mm²
Tensile Strength : 590 N/mm²
Elongation (L=5d) : 35 %
Impact ISO-V : 100 J (+20°C)

GOST

Approvals

Shielding Gases (acc. ISO 14175 and EN 439)

TIG : I1 - Ar (%100)

Materials to be Welded

| | EN 10088-1/-2 | Mat. Nr. |
|--------------------------------|----------------|----------|
| Corrosion resistant cladsteels | X2 CrNiN 18 10 | 1.4311 |
| | X2 CrNi 19 11 | 1.4306 |
| | X4 CrNi 18 10 | 1.4301 |

Dissimilar metals (mild and low alloyed steel to stainless steel)

Build-up welding on mild and low alloyed steel

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Tube Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------|
| TIG Rod | - | - | - | X | X | X | X | 5 kg |

AS TIG 316L



TIG Rod for Welding of Austenitic Stainless Steels

Classification

AWS A5.9 : ER316L
ISO 14343-A : W 19 12 3 L

General Description

Solid rod with extra low carbon for welding austenitic CrNiMo-steels.
High resistance to intergranular corrosion and general corrosion conditions.

Chemical Composition (w%), Typical, Wire

| C | Si | Mn | Cr | Ni | Mo | P+S |
|--------|------|------|----|----|------|---------|
| < 0.03 | 0.45 | 1.70 | 18 | 12 | 2.50 | < 0.060 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 400 N/mm²
Tensile Strength : 620 N/mm²
Elongation (L=5d) : 35 %
Impact ISO-V : 100 J (+20°C)

Approvals

ABS (ER316L)
GOST, SEPRO

Shielding Gases (acc. ISO 14175 and EN 439)

TIG : I1 - Ar (%100)

Materials to be Welded

| | EN 10088-1/-2 | EN 10213-4 | Mat. Nr. |
|--|---------------------|-------------------|----------|
| Extra Low Carbon (C < %0.03) | X2 CrNiMo 17 12 2 | | 1.4404 |
| | X2 CrNiMo 18 14 3 | | 1.4435 |
| | X2 CrNiMoN 17 11 2 | | 1.4406 |
| | X2 CrNiMoN 17 13 3 | | 1.4429 |
| Medium Carbon (C > %0.03) | X4 CrNiMo 17 12 2 | | 1.4401 |
| | X4 CrNiMo 17 13 3 | | 1.4436 |
| | | G-X5 CrNiMo 19 11 | 1.4408 |
| Ti/Nb Stabilized | X6 CrNiMoTi 17 12 2 | | 1.4571 |
| | X6 CrNiMoNb 17 12 2 | | 1.4580 |
| | X6 CrNiNb 18 10 | | 1.4550 |
| | | G-X5 CrNiNb 19 10 | 1.4552 |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | Tube Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------|
| TIG Rod | - | - | - | X | X | X | X | 5 kg |

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AS MIG AISi5 / AS TIG AISi5



MIG Wire and TIG Rod for Welding of Aluminium Alloys

Classification

AWS A5.10 : ER4043
ISO 18273 : S Al 4043A / AISi5(Al)

General Description

Solid wire and rod for welding of aluminium-silicium alloys.

Chemical Composition (w%), Typical, Wire

| Si | Mn | Fe | Cu | Zn | Ti | Al |
|-----------|--------|--------|--------|--------|--------|-------|
| 4.5 - 5.5 | < 0.05 | < 0.50 | < 0.30 | < 0.10 | < 0.01 | kalan |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 100 N/mm² Melting Range : 575 - 625 °C
Tensile Strength : 160 N/mm² Density : 2.68 gr/cm³
Elongation (L=5d) : 15 %
Impact ISO-V : 20 J (+20°C)

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : I1 - Ar (%100)
TIG : I1 - Ar (%100)

Materials to be Welded

| | DIN 1725-1 | DIN 1725-2 | Mat. Nr. | Alloy Nr. |
|---------------------------------|------------|------------|----------|-----------|
| Aluminium Wrought Alloys | AlMgSi 0.5 | | 3.3206 | 6060 |
| | AlMgSi 0.7 | | 3.3210 | 6005A |
| | AlMgSi 0.8 | | 3.2316 | 6181 |
| Aluminium Cast Alloys | | G-AISI 5 | | 443.0 |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | 4.0 | Spool/Tube Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| MIG Wire | - | X | X | - | - | - | - | - | 7 kg |
| TIG Rod | - | - | - | - | X | X | - | X | 5 kg |

AS MIG AISi12 / AS TIG AISi12



MIG Wire and TIG Rod for Welding of Aluminium Alloys

Classification

AWS A5.10 : ER4047
ISO 18273 : S Al 4047A / AISi12(Al)

General Description

Solid wire and rod for welding of cast aluminium alloys containing up to 12% silicium.

Chemical Composition (w%), Typical, Wire

| Si | Mn | Fe | Cu | Zn | Ti | Al |
|-------------|--------|--------|--------|--------|--------|-------|
| 11.5 - 12.5 | < 0.15 | < 0.50 | < 0.30 | < 0.20 | < 0.01 | kalan |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 80 N/mm² Melting Range : 575 - 585 °C
Tensile Strength : 180 N/mm² Density : 2.65 gr/cm³
Elongation (L=5d) : 5 %

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : I1 - Ar (%100)
TIG : I1 - Ar (%100)

Materials to be Welded

| | DIN 1725-1 | DIN 1725-2 | Mat. Nr. | Alloy Nr. |
|------------------------------|------------|-------------------|----------|-----------|
| Aluminium Cast Alloys | | G-AISI 12 | 3.3581 | A413.0 |
| | | G-AISI 12 (Cu) | 3.3583 | |
| | | G-AISI 10 Mg | 3.2381 | 361.0 |
| | | G-AISI 10 Mg (Cu) | 3.2383 | |
| | | G-AISI 9 Mg | 3.2373 | 359.0 |
| | | G-AISI 9 Cu 3 | 3.2161 | |
| | | G-AISI 7 Mg | 3.2171 | 356.0 |
| | | G-AISI 6 Cu 4 | 3.2151 | 319.0 |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | 4.0 | Spool/Tube Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| MIG Wire | - | X | X | - | - | - | - | - | 7 kg |
| TIG Rod | - | - | - | - | X | - | X | - | 5 kg |

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AS MIG AlMg5 / AS TIG AlMg5



MIG Wire and TIG Rod for Welding of Aluminium Alloys

Classification

AWS A5.10 : ER5356
ISO 18273 : S Al 5356 / AlMg5

General Description

Solid wire and rod for welding of aluminium alloys containing more than 3% magnesium.

Chemical Composition (w%), Typical, Wire

| Si | Mg | Mn | Fe | Cr | Cu | Zn | Ti | Al |
|------|-----------|--------|--------|--------|--------|--------|--------|-------|
| 0.15 | 4.5 - 5.5 | < 0.20 | < 0.40 | < 0.15 | < 0.10 | < 0.10 | < 0.06 | kalan |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 130 N/mm² Melting Range : 565 - 635 °C
Tensile Strength : 280 N/mm² Density : 2.65 gr/cm³
Elongation (L=5d) : 25 %

Shielding Gases (acc. ISO 14175 and EN 439)

MIG : I1 - Ar (%100)
TIG : I1 - Ar (%100)

Materials to be Welded

Aluminium Wrought Alloys

| DIN 1725-1 | Mat. Nr. | Alloy Nr. |
|---------------|----------|-----------|
| AlMg 3 | 3.3535 | 5754 |
| AlMg 4.5 | 3.3345 | 5082 |
| AlMg 5 | 3.3555 | 5056A |
| AlMg 2 Mn 0.8 | 3.3527 | 5049 |
| AlMg 2.7 Mn | 3.3537 | 5454 |
| AlMg 4 Mn | 3.3545 | 5086 |
| AlZn 4.5 Mg 1 | 3.4335 | 7020 |

Aluminium Cast Alloys

| DIN 1725-2 | Mat. Nr. | Alloy Nr. |
|-------------|----------|-----------|
| G-AlMg 3 | 3.3541 | |
| G-AlMg 3 Si | 3.3241 | 512.0 |
| G-AlMg 5 | 3.3561 | B535.0 |
| G-AlMg 5 Si | 3.3261 | |

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | 4.0 | Spool/Tube Weight |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|
| MIG Wire | - | X | X | - | - | - | - | - | 7 kg |
| TIG Rod | - | - | - | - | X | X | - | - | 5 kg |

AS FC-71 Super



Flux Cored Welding Wire for Welding of Un-Alloy Steels

Classification

AWS A5.20 : E71T-1H8
EN ISO 17632-A : T42 2 PC 2 H10

General Description

All position gas shielded flux cored wire for high quality welding.
Excellent operator appeal due to superior welding characteristics.
Specially developed for welding with 100% CO₂. Also suitable for welding on coated plate with use of 100% CO₂.
Smooth arc with low spatter.
Good mechanical properties.
Excellent wire feeding.

Chemical Composition (w%), Typical, All Weld Metal

| C | Si | Mn | P | S |
|------|------|------|---------|---------|
| 0.05 | 0.50 | 1.50 | < 0.015 | < 0.015 |

Mechanical Properties, Typical, All Weld Metal

Yield Strength : 525 N/mm²
Tensile Strength : 597 N/mm²
Elongation (L=5d) : 28 %
Impact ISO-V : 106 J (-20°C)

Approvals

| ABS | RINA | SEPRO |
|----------|----------|-------|
| E71T-1H8 | 3Y S H10 | + |

Shielding Gases (acc. ISO 14175 and EN 439)

MAG : C1 - CO₂ (%100)

Amount

15 - 25 l/min

Current Type

DC(+)

Packaging and Available Sizes

| Diameter | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 2.8 | Spool Weight |
|-----------------|-----|-----|-----|-----|-----|-----|-----|--------------|
| Flux Cored Wire | - | - | X | - | - | - | - | 15 kg |

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AS FC-71 Super



Flux Cored Welding Wire for Welding of Un-Alloy Steels

Materials to be Welded

| | |
|---|---|
| General Structural Steel | : S185, S235, S275 |
| Ship Plates | : Grade A, B, D, AH32 - EH36 |
| Cast Steel | : GP240R |
| Pipe Material | : X42, X46, X52 |
| Boiler & Pressure Vessel Steel | : P235GH, P265GH, P295GH, P355GH P275N/NH, P355N/NH |
| Fine Grained Steel | : S275, S355, S420 S275M, S275ML, S355M, S355ML, S420M, S420ML |



AS KARBON



Carbon Arc Electrode for Cutting and Gouging Applications

General Description

Arc carbon cutting process is based on the integral function of electric arc and pressurized air using in cutting process. The metal that is molten by electric arc, is removed by the air jet. The tip of the arc cutting torch, is suitable for every cutting / gouging positions and supported by special nozzle that directs to air-jet. This process uses carbon, pressurized air and electric current to cut or gouge the metals and has many advantages over the conventional cutting processes like oxy-fuel or saw blade cutting.

Advantages:

- High speed gouging and metal removals,
- Easy usage,
- Cleaner and more comfortable working environment than other ones,
- Enables to work with different materials like mild and stainless steels, cast irons, copper and light alloys,
- No risk of explosion.

How to Use the Carbon Arc Cutting Electrodes?

- Connect the electrode with the DC (+) current to the work piece,
- Connect the air-jet apparatus to the electrode holder,
- Keep the distance between electrode and work pieces about 150 mm. Consider the type of current (DC or AC), diameter of the electrode, amount of current and other parameters like material type,
- Turn the air-jet valve on,
- Establish the arc between electrode and work piece. Arc distance must be kept around 1 to 5 mm (very short),
- To remove the metal, that is cut or gouge, bend the electrode about 30° (maximum current limit must not be exceeded).

Approvals

SEPRO

+

Application Areas

Foundries:

To remove and gouge of the risers and runners of the mild / alloyed steel and iron castings.

Steel Industries :

Removing of the slag inclusions on the alloyed non-alloyed steel billet and slabs, blums, surface cleaning of the faulty weld beads.

Manufacturing of the Pressure-Vessel, Ship and Steel Constructions:

The surface cleaning of the rear side of the double sided welding applications before the process removing of the miswelded parts, weld beads from the process region and cutting the alloyed steel work pieces.

Repair and Maintenance Factories:

Pipe, metal sheets cutting and maintenance of the cast pieces.

Carbon Cutting Parameters / Packaging and Available Sizes

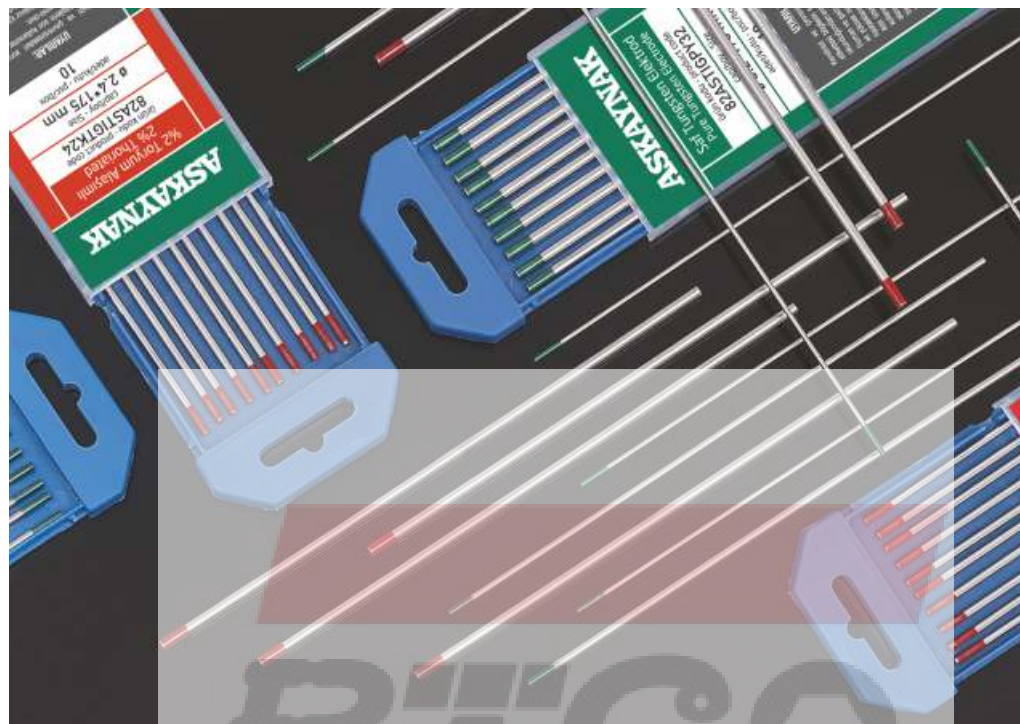
| Diameter [mm] | Length [mm] | Current [Amp] | Voltage [V] | Electrode Weight [gr/100 pcs] | Packaging [pcs/box] |
|--------------------|------------------|--------------------|------------------|------------------------------------|--------------------------|
| 6.4 | 305 | 150 - 350 | 41 - 43 | 2000 | 50 |
| 8.0 | 305 | 200 - 450 | 44 - 48 | 2600 | 50 |
| 10.0 | 305 | 300 - 550 | 46 - 50 | 4600 | 50 |

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.

AS Tungsten TIG Electrodes



Pure Tungsten (GREEN) and 2% Thoriated Tungsten (RED) TIG Electrodes



AS Pure Tungsten Electrodes (Color Code: GREEN) : AWS A5.12 : EWP

Pure tungsten electrodes have an AWS (American Welding Society) classification of EWP and typically are less expensive than their “alloyed” counterparts. They contain 99.50% tungsten and have the highest consumption rate of all electrodes, and provide a clean, balled tip when heated. This shape offers especially good arc stability for AC welding with a balanced waveform. Pure tungsten electrodes also provide good arc stability for AC sine wave welding on aluminum and magnesium. They are not, however, used for DC welding.

AS 2 % Thoriated Tungsten Electrodes (Color Code: RED) : AWS A5.12 : EWTh-2

Preferred for their longevity and ease of use, 2% thoriated tungsten electrodes are the most commonly used electrodes today. They contain a minimum of 97.30% tungsten and 1.70% to 2.20% thorium, and they have an AWS classification of EWTh-2.

These electrodes offer good arc starts and provide a higher current-carrying capacity than many other types. 2% thoriated tungsten also operates far below its melting temperature, which results in a considerably lower rate of consumption, minimizes arc wandering and lessens instances of weld contamination. These electrodes can be used for AC welding, and they are exceptional for DC electrode negative (straight polarity) on carbon and stainless steel, nickel and titanium applications.

During manufacturing, thorium is evenly dispersed throughout the electrode. This evenness allows the electrode to maintain a sharpened edge the ideal electrode shape for welding thin steel. Sharpening the electrode's point, however, should be done with great care. Thoriated tungsten contains low levels of radioactivity. Therefore, operators must always follow manufacture's warnings, instructions, and the MSDS (Material Safety Data Sheet) for its use.

| Diameter [mm] | Length [mm] | Packaging [pcs/box] |
|--------------------|------------------|--------------------------|
| 1.6 | 175 | 10 |
| 2.0 | 175 | 10 |
| 2.4 | 175 | 10 |
| 3.2 | 175 | 10 |



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