



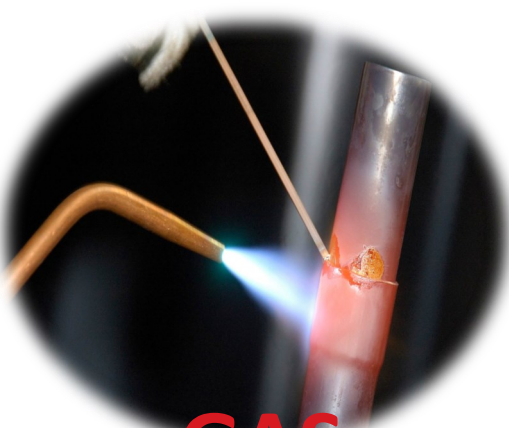
**TAURUS®**



**MIG**



**TIG**



**GAS**



**ARC**



**WELDING CONSUMABLES**

# INDEX

| DESCRIPTION             | PAGE    |
|-------------------------|---------|
| MMA ELECTRODES          | 3 - 14  |
| GOUGING RODS            | 15      |
| MIG WELDING WIRE        | 16 - 37 |
| TIG WELDING RODS        | 38 - 46 |
| TIG TUNGSTEN ELECTRODES | 47 - 49 |
| GAS RODS                | 50 - 57 |
| FLUXES                  | 58      |





TAURUS PRO E6013 is a rutile-cellulosic type stick electrode designed for a wide range of general fabrication applications for workshop and site conditions. Excellent operability in all positions including vertical down. Particularly suited where poor fit-up conditions prevail. Easy slag removal and low spatter loss. Weld bead appearance is smooth with a fine ripple formation.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Vertical down • Overhead

## CLASSIFICATIONS

AWS A5.1 E 6013

DIN 1913 E 43 22 R(C)3

| COMPOSITION | %      |
|-------------|--------|
| Carbon      | 0.06 % |
| Manganese   | 1.50 % |
| Silicon     | 0.30 % |

| MECHANICAL                  | AS WELDED                 |
|-----------------------------|---------------------------|
| Yield strength              | >430 N/mm <sup>2</sup>    |
| Tensile strength            | 520-560 N/mm <sup>2</sup> |
| Elongation (5xd)            | >25 %                     |
| Impact strength ISO-V@+20°C | 100 Joule                 |
| Impact strength ISO-V@0°C   | 50 Joule                  |

| PRODUCT CODE  | DESCRIPTION                                  | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|---------------|----------------------------------------------|-----------|--------------|-----------|-------------------------|
| 6013-2.00-1-E | TAURUS PRO M/S ELECTRODE 6013-2.0MM-1KG PACK | 2.0 x 300 | 1 or 20      | 1000      | 50 / 90                 |
| 6013-2.60-1-E | TAURUS PRO M/S ELECTRODE 6013-2.6MM-1KG PACK | 2.6 x 300 | 1 or 20      | 1000      | 50 / 90                 |
| 6013-2.60-5-E | TAURUS PRO M/S ELECTRODE 6013-2.6MM-5KG PACK | 2.6 x 300 | 5 or 20      | 1000      | 50 / 90                 |
| 6013-3.20-1-E | TAURUS PRO M/S ELECTRODE 6013-3.2MM-1KG PACK | 3.2 x 350 | 1 or 20      | 1000      | 90 / 130                |
| 6013-3.20-5-E | TAURUS PRO M/S ELECTRODE 6013-3.2MM-5KG PACK | 3.2 x 350 | 5 or 20      | 1000      | 90 / 130                |
| 6013-4.00-5-E | TAURUS PRO M/S ELECTRODE 6013-4.0MM-5KG PACK | 4.0 x 400 | 5 or 20      | 1000      | 110 / 170               |

# TAURUS PRO ELECTRODE 7018-1 VACUUM PACKED ALUMINIUM CAN



TAURUS PRO 7018-1 are stored in a hermetically sealed vacuum packed aluminum container to keep the electrodes dry. It is a basic-coated hydrogen-controlled electrode for high mechanical-property requirements and crack-resistance. Suitable for crack resistant joint welding on higher carbon steels. The double coating provides very stable arc characteristics with excellent all position weldability. Low spatter loss, ready slag detachment and regular bead appearance. COD tested for offshore applications.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.1 E 7018-1 H4R

EN ISO 2560-A-E 46 4 B 12 H5

## APPROVALS

Lloyd's Register

| COMPOSITION | %      |
|-------------|--------|
| Carbon      | 0.06 % |
| Manganese   | 1.50 % |
| Silicon     | 0.30 % |

| MECHANICAL                  | AS WELDED                 |
|-----------------------------|---------------------------|
| Yield strength              | >430 N/mm <sup>2</sup>    |
| Tensile strength            | 520-560 N/mm <sup>2</sup> |
| Elongation (5xd)            | >25 %                     |
| Impact strength ISO-V@+20°C | 100 Joule                 |
| Impact strength ISO-V@0°C   | 50 Joule                  |

| PRODUCT CODE  | DESCRIPTION                                                           | SIZE (MM) | PACKAGE (KG) | TYPICAL CURRENT MIN/MAX |
|---------------|-----------------------------------------------------------------------|-----------|--------------|-------------------------|
| 7018-1-2.60-E | TAURUS PRO LOW HYDROGEN ELECTRODE 7018-1 H4R 2.6MM (VP ALUMINIUM CAN) | 2.6 x 350 | 2 or 20      | 60 / 100                |
| 7018-1-3.20-E | TAURUS PRO LOW HYDROGEN ELECTRODE 7018-1 H4R 3.2MM (VP ALUMINIUM CAN) | 3.2 x 350 | 5 or 20      | 90 / 140                |
| 7018-1-4.00-E | TAURUS PRO LOW HYDROGEN ELECTRODE 7018-1 H4R 4.0MM (VP ALUMINIUM CAN) | 4.0 x 400 | 5 or 20      | 140 / 190               |

# TAURUS PRO ELECTRODE 7024



TAURUS PRO 7024 is a rutile, coated-iron, high-recovery electrode which deposits metal of good metallurgical properties quickly and economically. Designed for downhand and fillet welding. TAURUS 7024 has a recovery of approximately 160%. The arc is smooth and consistent with very little spatter. Striking and restriking qualities are excellent.

## WELDING POSITIONS

• Flat • Horizontal

## CLASSIFICATIONS

AWS A5.1 E 7024

ISO 2560 E 513 RR 160 32

DIN 1913 E 51 32 RR 11 160

| COMPOSITION | %      |
|-------------|--------|
| Carbon      | 0.05 % |
| Manganese   | 0.80 % |
| Silicon     | 0.40 % |

| MECHANICAL                   | AS WELDED                 |
|------------------------------|---------------------------|
| Yield strength               | >500 N/mm <sup>2</sup>    |
| Tensile strength             | 510-610 N/mm <sup>2</sup> |
| Elongation (5xd)             | >24 %                     |
| Impact strength ISO-V@ 0°C   | 60 Joule                  |
| Impact strength ISO-V@ -20°C | >60 Joule                 |

| PRODUCT CODE | DESCRIPTION                                 | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|---------------------------------------------|-----------|--------------|-----------|-------------------------|
| 7024-3.20-E  | TAURUS PRO IRON POWDER ELECTRODE 7024-3.2MM | 3.2 x 350 | 5 or 20      | 1000      | 130 / 160               |
| 7024-4.00-E  | TAURUS PRO IRON POWDER ELECTRODE 7024-4.0MM | 4.0 x 400 | 5 or 20      | 1000      | 180 / 220               |

# TAURUS PRO ELECTRODE 6010



TAURUS PRO 6010 is a medium coated, DC, cellulosic electrode for welding vertical down in pipeline and storage tank construction. Recommended for root-filler layers in pipeline applications. An extremely fast deposition rate can be obtained applying a touch or short-arc technique. The electrode provides a very steady arc over a wide range of current values.

## WELDING POSITIONS

- Vertical down

## CLASSIFICATIONS

AWS A5.1 E 6010

ISO 2560 E 433 C 19

DIN 1913 E 43 32 C 4

| COMPOSITION | VALUE  |
|-------------|--------|
| Carbon      | 0.07 % |
| Manganese   | 0.15 % |
| Silicon     | 0.02 % |

| MECHANICAL                  | AS WELDED             |
|-----------------------------|-----------------------|
| Yield strength              | 400 N/mm <sup>2</sup> |
| Tensile strength            | 460 N/mm <sup>2</sup> |
| Elongation (5xd)            | 24 %                  |
| Impact strength ISO-V@+20°C | 90 Joule              |
| Impact strength ISO-V@0°C   | 60 Joule              |
| Impact strength ISO-V@-20°C | 50 Joule              |

| PRODUCT CODE | DESCRIPTION                          | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|--------------------------------------|-----------|--------------|-----------|-------------------------|
| 6010-2.60-E  | TAURUS PRO PIPE ELECTRODE 6010-2.6MM | 2.6 x 350 | 2            | 20        | 50 / 65                 |
| 6010-3.20-E  | TAURUS PRO PIPE ELECTRODE 6010-3.2MM | 3.2 x 350 | 5            | 20        | 90 / 120                |
| 6010-4.00-E  | TAURUS PRO PIPE ELECTRODE 6010-4.0MM | 4.0 x 400 | 5            | 20        | 110 / 140               |

# TAURUS PRO ELECTRODE 308L



TAURUS PRO 308L is a general purpose, extra-low carbon, austenitic electrode with rutile coating for welding corrosion-resistant CRNi steels. Resistant to atmospheric grain disintegration at operating temperatures up to 350°C. Very smooth weld with clean weld edge. Low spatter loss and easy slag removal. Suitable for welding AISI 302, 304, 340L and 304LN.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.4 E 308L-16

ISO 3581 E 19 9 LR 26

DIN 8556 E 19 9 nC R 26

| COMPOSITION | %       |
|-------------|---------|
| Carbon      | 0.04 %  |
| Manganese   | 0.78 %  |
| Silicon     | 0.72 %  |
| Nickel      | 9.67 %  |
| Chromium    | 19.29 % |

| MECHANICAL                  | AS WELDED             |
|-----------------------------|-----------------------|
| 0.2% Proof stress           | 400 N/mm <sup>2</sup> |
| Tensile strength            | 550 N/mm <sup>2</sup> |
| Elongation (5xd)            | 35 %                  |
| Reduction of area           | 50 %                  |
| Impact strength ISO-V@0°C   | 60 Joule              |
| Impact strength ISO-V@+20°C | 80 Joule              |

| PRODUCT CODE | DESCRIPTION                         | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|-------------------------------------|-----------|--------------|-----------|-------------------------|
| 308L-2.00-E  | TAURUS PRO S/S ELECTRODE 308L-2.0MM | 2.0 x 300 | 1            | 20        | 30 / 50                 |
| 308L-2.60-E  | TAURUS PRO S/S ELECTRODE 308L-2.6MM | 2.6 x 300 | 1            | 20        | 50 / 75                 |
| 308L-3.20-E  | TAURUS PRO S/S ELECTRODE 308L-3.2MM | 3.2 x 350 | 1            | 20        | 75 / 110                |
| 308L-4.00-E  | TAURUS PRO S/S ELECTRODE 308L-4.0MM | 4.0 x 350 | 1            | 20        | 110 / 150               |

# TAURUS PRO ELECTRODE 309L



TAURUS PRO 309L is a rutile, extra-low carbon-resistant electrode for welding corrosion resistant and heat resistant CR and CrNi steels. The high level of alloying elements also makes this electrode suitable for welding Cr and CrNi steel to mild steel. Very smooth weld with clean edge, low spatter loss and excellent slag removability.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.4 E 309L-16

ISO 3581 E 23 12 LR 26

DIN 8556 E 23 12 nC R 26

| COMPOSITION | %       |
|-------------|---------|
| Carbon      | 0.03 %  |
| Manganese   | 1.20 %  |
| Silicon     | 0.70 %  |
| Nickel      | 13.00 % |
| Chromium    | 25.00 % |

| MECHANICAL                  | AS WELDED             |
|-----------------------------|-----------------------|
| 0.2% Proof stress           | 480 N/mm <sup>2</sup> |
| Tensile strength            | 600 N/mm <sup>2</sup> |
| Elongation (5xd)            | 35 %                  |
| Reduction of area           | 40 %                  |
| Impact strength ISO-V@+20°C | 60 Joule              |

| PRODUCT CODE | DESCRIPTION                         | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|-------------------------------------|-----------|--------------|-----------|-------------------------|
| 309L-2.60-E  | TAURUS PRO S/S ELECTRODE 309L-2.6MM | 2.6 x 300 | 1            | 20        | 40 / 70                 |
| 309L-3.20-E  | TAURUS PRO S/S ELECTRODE 309L-3.2MM | 3.2 x 350 | 1            | 20        | 70 / 100                |
| 309L-4.00-E  | TAURUS PRO S/S ELECTRODE 309L-4.0MM | 4.0 x 350 | 1            | 20        | 110 / 140               |





# TAURUS PRO ELECTRODE 316L



TAURUS PRO 316L is a rutile, high-alloy, extra-low carbon austenitic electrode for welding corrosion resistant CrNiMo steels resistant to atmospheric corrosion. Resistant to grain disintegration at operating temperatures up to 350°C. Very smooth weld with clean weld edge, low spatter loss and easy slag removal. Suitable for welding AISI/ASTM 316, 316L, 316LN, 316H and 316Ti.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.4 E 316L-16

ISO 3581 E 19 12 3 LR 26

DIN 8556 E 19 12 3 nC R 26

| COMPOSITION | %       |
|-------------|---------|
| Carbon      | 0.03 %  |
| Manganese   | 0.70 %  |
| Silicon     | 0.70 %  |
| Nickel      | 12.00 % |
| Chromium    | 19.00 % |
| Molybdenum  | 2.50 %  |

| MECHANICAL                  | AS WELDED             |
|-----------------------------|-----------------------|
| 0.2% Proof stress           | 400 N/mm <sup>2</sup> |
| Tensile strength            | 550 N/mm <sup>2</sup> |
| Elongation (5xd)            | 35 %                  |
| Reduction of area           | 50 %                  |
| Impact strength ISO-V@0°C   | 60 Joule              |
| Impact strength ISO-V@+20°C | 70 Joule              |

| PRODUCT CODE | DESCRIPTION                         | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|-------------------------------------|-----------|--------------|-----------|-------------------------|
| 316L-2.00-E  | TAURUS PRO S/S ELECTRODE 316L-2.0MM | 2.0 x 300 | 1            | 20        | 30 / 50                 |
| 316L-2.60-E  | TAURUS PRO S/S ELECTRODE 316L-2.6MM | 2.6 x 300 | 1            | 20        | 50 / 75                 |
| 316L-3.20-E  | TAURUS PRO S/S ELECTRODE 316L-3.2MM | 3.2 x 350 | 1            | 20        | 75 / 110                |
| 316L-4.00-E  | TAURUS PRO S/S ELECTRODE 316L-4.0MM | 4.0 x 350 | 1            | 20        | 110 / 150               |



# TAURUS PRO ELECTRODE INOX 680 (E312)



TAURUS PRO INOX 680 is a rutile, austenitic-ferritic coated electrode with 25-30 % ferrite content. The weld metal is extremely crack resistant and lends itself admirably to the welding of dissimilar and difficult-to-weld steels. It can be used for the welding of high-nickel alloys without becoming fully austenitic due to nickel pickup.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.4 E 312L-16

ISO 3581 E 29 9 R 26

DIN 8556 E 29 9 R 26

| COMPOSITION | %       |
|-------------|---------|
| Carbon      | 0.10 %  |
| Manganese   | 1.00 %  |
| Silicon     | 0.90 %  |
| Nickel      | 10.00 % |
| Chromium    | 29.00 % |

| MECHANICAL                  | AS WELDED             |
|-----------------------------|-----------------------|
| 0.2% Proof stress           | 550 N/mm <sup>2</sup> |
| Tensile strength            | 750 N/mm <sup>2</sup> |
| Elongation (5xd)            | 23 %                  |
| Impact strength ISO-V@+20°C | 70 Joule              |
| Ferrite level               | 35 %                  |

| PRODUCT CODE | DESCRIPTION                                   | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|-----------------------------------------------|-----------|--------------|-----------|-------------------------|
| 680-2.60-E   | TAURUS PRO S/S ELECTRODE INOX 680-2.6MM (312) | 2.6 x 300 | 1            | 20        | 50 / 75                 |
| 680-3.20-E   | TAURUS PRO S/S ELECTRODE INOX 680-3.2MM (312) | 3.2 x 350 | 1            | 20        | 75 / 110                |
| 680-4.00-E   | TAURUS PRO S/S ELECTRODE INOX 680-4.0MM (312) | 4.0 x 350 | 1            | 20        | 110 / 150               |

# TAURUS PRO ELECTRODE Ni 55



TAURUS PRO Ni 55 is an all positional electrode depositing a 55% Ni/45 % Fe weld metal designed specially for strength welding of grey cast iron and malleable cast iron with steel. Also designed to operate at low current which minimises heat input and thus facilitates the cold welding of cast iron. Weld induced stresses can be reduced by hammer peening. Stable arc with clean bead appearance. The weld metal is fully machinable.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.15 E NiFe-CI

ISO R 1071 E NiFe BG 22

DIN 8573 E NiFe BG 1

| COMPOSITION | %       |
|-------------|---------|
| Carbon      | 0.40 %  |
| Manganese   | 0.45 %  |
| Silicon     | 0.20 %  |
| Nickel      | 55.00 % |

| MECHANICAL           | AS WELDED             |
|----------------------|-----------------------|
| Yield strength       | 310 N/mm <sup>2</sup> |
| Tensile strength     | 450 N/mm <sup>2</sup> |
| Victor hardness HV30 | 19 HB                 |

| PRODUCT CODE | DESCRIPTION                                 | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|---------------------------------------------|-----------|--------------|-----------|-------------------------|
| NI55-2.6-E   | TAURUS PRO CI ELECTRODE NICKELCAST 55-2.6MM | 2.6 x 300 | 1            | 20        | 50 / 80                 |
| NI55-3.2-E   | TAURUS PRO CI ELECTRODE NICKELCAST 55-3.2MM | 3.2 x 350 | 1            | 20        | 80 / 110                |
| NI55-4.00-E  | TAURUS PRO CI ELECTRODE NICKELCAST 55-4.0MM | 4.0 x 350 | 1            | 20        | 120 / 170               |

# TAURUS PRO ELECTRODE Ni 98



TAURUS PRO Ni 98 is a pure nickel electrode which is universally used for welding all types of cast iron. Specially designed to operate at low currents which minimises heat input and thus facilitates the cold welding of cast iron. Weld-induced stresses can be reduced by hammer peening. Stable arc with clean bead appearance. The weld metal is fully machinable.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.15 E Ni-CI

DIN 8573 E Ni BG 1

| COMPOSITION | %       |
|-------------|---------|
| Carbon      | 0.30 %  |
| Manganese   | 0.20 %  |
| Nickel      | 97.00 % |

| MECHANICAL           | AS WELDED             |
|----------------------|-----------------------|
| Yield strength       | 219 N/mm <sup>2</sup> |
| Tensile strength     | 304 N/mm <sup>2</sup> |
| Victor hardness HV30 | 160 HV                |

| PRODUCT CODE | DESCRIPTION                                 | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|---------------------------------------------|-----------|--------------|-----------|-------------------------|
| NI98-2.60-E  | TAURUS PRO CI ELECTRODE NICKELCAST 98-2.6MM | 2.6 x 300 | 1            | 20        | 50 / 80                 |
| NI98-3.2-E   | TAURUS PRO CI ELECTRODE NICKELCAST 98-3.2MM | 3.2 x 350 | 1            | 20        | 80 / 110                |
| NI98-4.0-E   | TAURUS PRO CI ELECTRODE NICKELCAST 98-4.0MM | 4.0 x 350 | 1            | 20        | 110 / 150               |



# TAURUS PRO ELECTRODE H600R



TAURUS PRO H600R is a rutile-coated, hard-facing electrode for surfacing worn parts of civil engineering, construction and mining machinery to be used without machining. Deposited metal of approximately 600 HV provides high toughness in spite of high hardness and excellent abrasion resistance to medium impact.

## WELDING POSITIONS

• Flat • Horizontal • Vertical up

## CLASSIFICATIONS

DIN 8555 E 2-UM-55

| COMPOSITION | %      |
|-------------|--------|
| Carbon      | 0.55 % |
| Manganese   | 1.00 % |
| Silicon     | 0.80 % |
| Chromium    | 7.00 % |

| MECHANICAL     | AS WELDED |
|----------------|-----------|
| Single layer   | 550 HV    |
| Multiple layer | 600 HV    |

| PRODUCT CODE | DESCRIPTION                                  | SIZE (mm) | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|--------------|----------------------------------------------|-----------|--------------|-----------|-------------------------|
| H600R-3.20-E | TAURUS PRO HARD FACING ELECTRODE H600R-3.2MM | 3.2 x 350 | 1            | 20        | 85 / 140                |
| H600R-4.00-E | TAURUS PRO HARD FACING ELECTRODE H600R-4.0MM | 4.0 x 400 | 1            | 20        | 100 / 170               |



The TAURUS 4047 aluminum welding electrode contains approximately 12% silicon making it a popular choice for welding aluminum alloys, particularly those with high silicon content.

It is known for its good fluidity and crack resistance, making it suitable for various applications in industries such as automotive, aerospace, and marine.

The TAURUS 4047 welding rod is typically used for welding aluminum to aluminum, as well as for repairing aluminium-silicon and aluminium-magnesium-silicon cast parts.

For optimum performance, during the welding process the electrode should be used perpendicular to the workpiece with a short arc length. When the workpiece thickness exceeds 10mm, preheating between 150°C and 250°C should be applied.

Slag residues cause corrosion and must therefore be removed completely from the weld bead.

The Taurus 4047 electrodes are supplied in a vacuum packed tin and must be stored in a dry location. Electrodes can be redried if required before use.

#### POLARITY

- DCEP (DC Electrode Positive)

#### WELDING POSITIONS

- Flat • Horizontal • Vertical up

#### CLASSIFICATIONS

- AWS/ASME SFA-5.3:E4047
- EN ISO 18273:E Al 4047 (AlSi 12)

| TYPICAL WELD DEPOSIT VALUES | %      |
|-----------------------------|--------|
| Silicon                     | 12%    |
| Aluminium                   | 87.7%  |
| Copper                      | 0.20 % |
| Chromium                    | 0.30 % |

| TYPICAL MECHANICAL VALUES             | AS WELDED |
|---------------------------------------|-----------|
| Yield strength (N/mm <sup>2</sup> )   | 80        |
| Tensile strength (N/mm <sup>2</sup> ) | 200       |
| Elongation A5(%)                      | 8         |

| PRODUCT CODE  | DESCRIPTION                                   | SIZE (mm)  | PACKAGE (kg) | BULK (kg) | TYPICAL CURRENT MIN/MAX |
|---------------|-----------------------------------------------|------------|--------------|-----------|-------------------------|
| 4047-2.50-2-E | TAURUS ALUMINIUM ELECTRODE 4047-2.5MM-2KG TIN | 2.50 x 350 | 2            | -         | 50 / 80                 |
| 4047-3.25-2-E | TAURUS ALUMINIUM ELECTRODE 4047-2.5MM-2KG TIN | 3.25 x 350 | 2            | -         | 70 / 120                |



TAURUS gouging carbon, also known as air-carbon arc cutting, is a metal removal process utilising the heat generated by an arc between a carbon electrode and the workpiece. Compressed air, directed through outlets on the torch, lifts molten metal away from the arc, preventing it from solidifying and consequently facilitating metal removal smoothly. Common applications are for weld-metal removal, back-gouging and reshaping torn metal.

#### REQUIRED EQUIPMENT

- Carbon electrodes.
- Gouging torch.
- MMA welder.
- Compressed air.

| PRODUCT CODE | DESCRIPTION                                   | SIZE (mm) | PACKAGE (PCS) | TYPICAL CURRENT MIN/MAX (A) |
|--------------|-----------------------------------------------|-----------|---------------|-----------------------------|
| GC-6.5-E     | TAURUS GOUGING CARBON 6.5 X 305MM (NON-JOINT) | 6.5 x 305 | 50            | 300 - 400                   |
| GC-8.0-E     | TAURUS GOUGING CARBON 8.0 X 305MM (NON-JOINT) | 8.0 x 305 | 50            | 350 - 450                   |
| GC-9.5-E     | TAURUS GOUGING CARBON 9.5 X 305MM (NON-JOINT) | 9.5 x 305 | 50            | 450 - 600                   |

# TAURUS MIG ER70S-6 BULK DRUM & CONE



The Taurus MIG wire drum contains premium quality solid welding wire that is pre-tensioned, resulting in little to no cast and helix when exiting. The straightness of the wire provides more accurate and consistent welds as well as tracking during welding, which is ideal for automated applications.

## SOME BENEFITS AND FEATURES

- Stable arc and minimal friction with smooth wire feeding.
- Anti-tangling and anti-twist design
- Wire wound under tension allowing it to be extracted out the drum without the need to rotate it.
- Improved productivity by reduced downtime between wire changes.

## WELDING PROCEDURE

The TAURUS ER70S-6 MIG wire is suitable for dip (short arc), spray arc and pulsed-arc transfer welding using CO<sub>2</sub> and Argon based shielding gases.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.18 ER 70s-6

| COMPOSITION | VALUE                       |
|-------------|-----------------------------|
| Carbon      | 0.07 - 0.15 %               |
| Manganese   | 1.4 - 1.85 %                |
| Silicon     | 0.8 - 1.15 %                |
| Sulphur     | 0.035 % Max                 |
| Phosphorous | 0.03 % Max                  |
| Copper      | Typical 0.18 %<br>0.4 % Max |

| MECHANICAL ( with CO <sub>2</sub> ) | AS WELDED     |
|-------------------------------------|---------------|
| 0.2% Proof stress                   | 430 MPa min   |
| Tensile strength                    | 510 - 570 MPa |
| Elongation on 50mm                  | 26 min        |
| Charpy V-Notch at +20°C             | 110 J min     |
| Charpy V-Notch at 0°C               | 80 J min      |
| Charpy V-Notch at -20°C             | 47 J min      |

| PRODUCT CODE | DESCRIPTION                                         | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|-----------------------------------------------------|-----------|--------------|-----------|
| 1.0-M-BD-250 | TAURUS BULK MIG WIRE 70S-6-1.0MM PER KG/250 KG DRUM | 1.0       | 250          | -         |
| 1.2-M-BD-250 | TAURUS BULK MIG WIRE 70S-6-1.2MM PER KG/250 KG DRUM | 1.2       | 250          | -         |
| D-CONE-250   | TAURUS BULK DRUM CONE & CONNECTOR PIPE              | -         | -            | -         |



The TAURUS ER70S-6 MIG wire is produced from high quality de-oxidised rod. The products are copper coated for increased shelf life, which facilitates good electrical conductivity with reduced friction during high speed welding. The TAURUS ER70S-6 MIG wire is a premium quality wire which is precision layer-wound to produce positive, uninterrupted feeding in semi-automatic and automated systems.

## WELDING PROCEDURE

The TAURUS ER70S-6 MIG wire is suitable for dip (short arc), spray arc and pulsed-arc transfer welding using CO<sub>2</sub> and Argon based shielding gases.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.18 ER 70s-6

SABS 145 Grade A

EN ISO 14341 G42 2 C G4Si1

EN ISO 636-A W 42 3 W4Si1

EN ISO 636-B W 49 3 W4Si1

## APPROVALS

- Lloyds register of shipping grade DXVud, BF, 2S, 2YS, H15
- American Bureau of shipping grade 2SA TUV

| COMPOSITION | VALUE                       |
|-------------|-----------------------------|
| Carbon      | 0.07 - 0.15 %               |
| Manganese   | 1.4 - 1.85 %                |
| Silicon     | 0.8 - 1.15 %                |
| Sulphur     | 0.035 % Max                 |
| Phosphorous | 0.03 % Max                  |
| Copper      | Typical 0.18 %<br>0.4 % Max |

| MECHANICAL ( with CO <sub>2</sub> ) | AS WELDED     |
|-------------------------------------|---------------|
| 0.2% Proof stress                   | 430 MPa min   |
| Tensile strength                    | 510 - 570 MPa |
| Elongation on 50mm                  | 26 min        |
| Charpy V-Notch at +20°C             | 110 J min     |
| Charpy V-Notch at 0°C               | 80 J min      |
| Charpy V-Notch at -20°C             | 47 J min      |

| PRODUCT CODE | DESCRIPTION                             | SIZE | PACKAGE | BULK |
|--------------|-----------------------------------------|------|---------|------|
| 0.6-5KG-M    | TAURUS MIG WIRE 70S-6-0.6MM-SMALL SPOOL | 0.6  | 5       | -    |
| 0.8-5KG-M    | TAURUS MIG WIRE 70S-6-0.8MM-SMALL SPOOL | 0.8  | 5       | -    |
| 0.9-1KG-M    | TAURUS MIG WIRE 70S-6-0.9MM-1KG         | 0.9  | 1       | -    |
| 0.8-M        | TAURUS MIG WIRE 70S-6-0.8MM             | 0.8  | 15      | 1080 |
| 0.9-M        | TAURUS MIG WIRE 70S-6-0.9MM             | 0.9  | 15      | 1080 |
| 1.0-M        | TAURUS MIG WIRE 70S-6-1.0MM             | 1    | 15      | 1080 |
| 1.2-M        | TAURUS MIG WIRE 70S-6-1.2MM             | 1.2  | 15      | 1080 |
| 1.6-M        | TAURUS MIG WIRE 70S-6-1.6MM             | 1.6  | 15      | 1080 |



# TAURUS MIG ER70S-6 - COPPER FREE



TAURUS ER70S-6 copper-free, mild steel is a premium quality MIG wire produced from high-quality de-oxidised rod. It features good feed ability, extended torch-tip life for improved productivity and good electrical conductivity and reduced friction during high-speed welding. Suitable for butt and fillet welding in all positions.

## THE BENEFITS OF COPPER FREE MIG WIRE

- Less spatter.
- Less welding dust (reduced harmful fumes).
- Good arc and feed performance.
- Better strength and forming quality.
- Extended liner and contact tip life.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.18 ER 70s-6

EN ISO 14341 G42 2 C 1 4Si1

| COMPOSITION | VALUE         |
|-------------|---------------|
| Carbon      | 0.07 - 0.15 % |
| Manganese   | 1.4 - 1.85 %  |
| Silicon     | 0.8 - 1.15 %  |

| MECHANICAL ( with CO <sub>2</sub> ) | AS WELDED |
|-------------------------------------|-----------|
| Yield strength                      | 470 Mpa   |
| Tensile strength                    | 575 MPa   |
| Elongation                          | 29 %      |

| PRODUCT CODE | DESCRIPTION                               | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------------------|-----------|--------------|-----------|
| 1.0-M-CF     | TAURUS MIG WIRE 70S-6-1.0MM (COPPER FREE) | 1.0       | 15           | 1080      |
| 1.2-M-CF     | TAURUS MIG WIRE 70S-6-1.2MM (COPPER FREE) | 1.2       | 15           | 1080      |



TAURUS MIG WIRE ER100S-G is a low-alloy steel welding wire containing nickel, molybdenum and vanadium. The wire, which is copper coated, is suitable for use in all positions. TAURUS MIG WIRE ER100S-G is recommended for welding a range of fine grained structural steels and low-alloy quenched and tempered steels having an ultimate tensile strength of up to 930 MPa. Argon based shielding gases are recommended.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

CLASSIFICATIONS

AWS A5.28 ER100S-G

EN ISO 16834-A W 69 4M3Ni1 CrMo

EN ISO 16834-B W 76 A 4M N4M2 (nearest)

| COMPOSITION | %           |
|-------------|-------------|
| Carbon      | 0.08 - 0.1  |
| Manganese   | 1.6 - 1.8   |
| Silicon     | 0.5 - 0.7   |
| Sulphur     | 0.018 Max   |
| Phosphorous | 0.15 Max    |
| Chromium    | 0.3 - 0.4   |
| Nickel      | 1.4 - 1.6   |
| Molybdenum  | 0.25 - 0.3  |
| Copper      | 0.35 Max    |
| Vanadium    | 0.09 - 1.11 |

| MECHANICAL              | AS WELDED |
|-------------------------|-----------|
| Tensile strength        | > 690 MPa |
| 0.2% Proof stress       | > 770 MPa |
| % Elongation on 50 mm   | >17       |
| Charpy V-Notch at -40°C | > 47 J    |

| PRODUCT CODE   | DESCRIPTION                                             | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|----------------|---------------------------------------------------------|-----------|--------------|-----------|
| ER100S-G-1.0-M | TAURUS MIG ER100S-G-1.0MM HIGH TENSILE - MINERAL COATED | 1.0       | 15           | 1080      |
| ER100S-G-1.2-M | TAURUS MIG ER100S-G-1.2MM HIGH TENSILE                  | 1.2       | 15           | 1080      |
| ER100S-G-1.6-M | TAURUS MIG ER100S-G-1.6MM HIGH TENSILE                  | 1.6       | 15           | 1080      |



The TAURUS FCW13 is a rutile type flux-cored wire suitable for use with M21 mixed gas or CO<sub>2</sub> shielding gas in steel construction, pipe welding, machine fabrication and ship-building. Especially when using mixed gas, welding in all positions with a wide parameter range is facilitated by the ease of controlling the weld pool and by the fast freezing of slag. It has good gap-bridging properties and low spatter and allows easy slag removal even in narrow grooves. The final result is a ripped, pore-free weld blending into the base metal without undercut.

#### WELDING POSITIONS

- All positions

#### CLASSIFICATIONS

- AWS A5.20: E71T1C
- AWS A5.20: E71T1M

#### APPROVALS

- Det Norske Veritas
- Bureau Veritas

| COMPOSITION | C1 % | M21 % |
|-------------|------|-------|
| Carbon      | 0.06 | 0.06  |
| Manganese   | 1.15 | 1.40  |
| Silicon     | 0.5  | 0.6   |

| MECHANICAL                            | AS WELDED                 | AS WELDED                 |
|---------------------------------------|---------------------------|---------------------------|
| Yield strength (N/mm <sup>2</sup> )   | 470                       | 530                       |
| Tensile strength (N/mm <sup>2</sup> ) | 540                       | 620                       |
| Elongation A5 (%)                     | 28                        | 25                        |
| Charpy V-notch Properties (J)         | -20° C -100<br>-30° C -50 | -20° C -100<br>-30° C -80 |

| PRODUCT CODE    | DESCRIPTION          | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|-----------------|----------------------|-----------|--------------|-----------|
| E71T-13-1.2-FCW | TAURUS FCW 13-1.20MM | 1.2       | 15           | -         |

# TAURUS MIG E71T-1C - FLUX-CORED



TAURUS E71T-1 is a rutile type CO<sub>2</sub> shielded flux-cored wire for welding carbon-manganese steels. It is recommended for the all positional welding of mild and low-alloy steels with a tensile strength of up to 620 MPa for general purpose fabrication. This wire provides increased toughness at sub zero temperatures.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Vertical down • Overhead

## CLASSIFICATIONS

AWS A5.20 E71T-1

## APPROVALS

- Det Norske Veritas
- Bureau Veritas

| COMPOSITION | %    |
|-------------|------|
| Carbon      | 0.04 |
| Manganese   | 1.32 |
| Silicon     | 0.42 |
| Sulphur     | 0.01 |
| Phosphorous | 0.02 |

| MECHANICAL              | AS WELDED |
|-------------------------|-----------|
| Yield strength          | 540 MPa   |
| Tensile strength        | 580 MPa   |
| Elongation on 5d        | 28        |
| Charpy V-Notch at -18°C | 65 J      |

| PRODUCT CODE   | DESCRIPTION                                   | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|----------------|-----------------------------------------------|-----------|--------------|-----------|
| E71T1C-1.2-FCW | TAURUS FCW E71T-1-1.2MM - CO <sub>2</sub> GAS | 1.2       | 15           | 1080      |
| E71T1C-1.6-FCW | TAURUS FCW E71T-1-1.6MM - CO <sub>2</sub> GAS | 1.6       | 15           | 1080      |



TAURUS E71T is a rutile-type, mixed gas(75% argon / 25% CO<sub>2</sub>) shielded flux-cored wire for welding carbon manganese steels. It is recommended for the all positional welding of mild and low-alloy steels with a tensile strength of up to 620 MPa for general purpose fabrication. This wire provides increased toughness at sub zero temperatures. It has low spatter levels and the slag is easily removable.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Vertical down • Overhead

## CLASSIFICATIONS

AWS A5.20 E71T-1M

| COMPOSITION | %     |
|-------------|-------|
| Carbon      | 0.022 |
| Manganese   | 1.6   |
| Silicon     | 0.82  |
| Sulphur     | 0.01  |
| Phosphorous | 0.014 |

| MECHANICAL              | AS WELDED |
|-------------------------|-----------|
| Yield strength          | 592 MPa   |
| Tensile strength        | 662 MPa   |
| Elongation on 5d        | 26        |
| Charpy V-Notch at -18°C | 80 J      |
| Charpy V-Notch at -29°C | 68 J      |

| PRODUCT CODE   | DESCRIPTION                         | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|----------------|-------------------------------------|-----------|--------------|-----------|
| E71T1M-1.2-FCW | TAURUS FCW E71T-1-1.2MM - MIXED GAS | 1.2       | 15           | 1080      |





The Taurus FCW E71T-1-1.2MM -H4 is a high-quality, high-deposition rutile flux-cored wire with an enhanced degree of fill for Argon/CO<sub>2</sub> gas mixtures. It is ideal for welding 355-460Mpa steels and thick steel components. The diffusible hydrogen level is consistently below 4ml/100g in deposited weld metal and since the seam of the wire is laser welded, there is no moisture pick-up. The wire is not copper coated and therefore there can be no contamination of feed liners, torches or contact tips resulting from copper flakes. It is designed for welding medium-strength steels (420MPa, 61psi yield strength) using either 100% CO<sub>2</sub> shielding or Argon/CO<sub>2</sub> shielding gas mixture (15 - 25% CO<sub>2</sub> and balance Argon).

## TYPICAL APPLICATIONS

Hard-facing of hot cut-offs, shear blades, dies for pressure casting, scraper blades, conveyors, rollers, crusher rolls and worn parts in agricultural equipment.

## FEATURES

- All positional welding capabilities with outstanding performance in vertical-up welding of fillet and butt welds.
- Coefficient of flux fill and current capacity designed to deliver all positional weldability.
- Savings in welding cost resulting from easy slag removal and lack of spatters. Ideal for applications in shipbuilding and steel construction.
- Designed for mixed gas and the use of 100% CO<sub>2</sub> is possible.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Vertical down • Overhead

## CLASSIFICATIONS

AWS A5.20: E71T-1 H4 / E71T-1M H4

EN 758: T 46 2 P C 1 H5 / T 46 2 P M 1 H5

| COMPOSITION | %    |
|-------------|------|
| Carbon      | 0.05 |
| Manganese   | 1.2  |
| Silicon     | 0.55 |
| Sulphur     | -    |
| Phosphorous | -    |

| MECHANICAL                            | AS WELDED |
|---------------------------------------|-----------|
| Yield strength (N/mm <sup>2</sup> )   | ≥460      |
| Tensile strength (N/mm <sup>2</sup> ) | 550-650   |
| Elongation A5 (%)                     | ≥22       |
| Impact Energy ISO - V (J) - 20°C      | ≥ 80      |

| PRODUCT CODE      | DESCRIPTION                       | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|-------------------|-----------------------------------|-----------|--------------|-----------|
| E71T1C-1.2-FCW-H4 | TAURUS FCW E71T-1-1.2MM - H4 SPEC | 1.2       | 15           | 1080      |





TAURUS E71T-11 is an easy-to-use open-arc, wire (no shielding gas required). It is recommended for use with smaller MIG machines or in areas where the provision of gas cylinders is not practical. TAURUS E71T-11 is well suited for butt, fillet and lap joints on steel thicknesses of 1.6 mm to 10 mm. It is not recommended for welding steel thicknesses greater than 12 mm.

## WELDING POSITIONS

• Downhand • Horizontal flat

## CLASSIFICATIONS

AWS A5.20 E71T-11

EN 17632-A T 42 Z W N 1 H10

| COMPOSITION | %     |
|-------------|-------|
| Carbon      | 0.18  |
| Manganese   | 1.0   |
| Silicon     | 0.25  |
| Sulphur     | 0.012 |
| Phosphorous | 0.012 |
| Aluminium   | 0.8   |

| MECHANICAL       | AS WELDED |
|------------------|-----------|
| Yield strength   | 430 MPa   |
| Tensile strength | 520 MPa   |
| Elongation on 5d | 23        |

| PRODUCT CODE     | DESCRIPTION                          | SIZE | PACKAGE | BULK |
|------------------|--------------------------------------|------|---------|------|
| E71T11-0.9-1-FCW | TAURUS GASLESS FCW E71T-11-0.9MM-1KG | 0.9  | 1       | -    |
| E71T11-0.9S-FCW  | TAURUS GASLESS FCW E71T-11-0.9MM-SM  | 0.9  | 5       | -    |
| E71T11-1.2S-FCW  | TAURUS GASLESS FCW E71T-11-1.2MM-SM  | 1.2  | 5       | -    |
| E71T11-1.2-FCW   | TAURUS GASLESS FCW E71T-11-1.2MM     | 1.2  | 15      | 1080 |



TAURUS MIG 70C-6M metal-cored wire combines the efficiency characteristics of solid wires with the advantages of high-productivity rates of flux-cored wires including low-fume generation rates, high efficiency, no slag cleaning or removal, pure-spray achievement when using 75-80% argon/balance carbon dioxide gas mixture and faster travel speeds for a given fillet size. It is well suited for applications where higher manganese and silicon levels are essential particularly in the presence of heavy mill scale, mild contaminants or when improved wetting of the weld bead is desired. Taurus E70C-6M wire excels in general purpose welding but is equally superior in higher-demanding situations such as in heavier sheet-metal fabrication, structural work, pipe welding and welding on hot-water heaters.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.18 E70C-6M

| COMPOSITION | %    |
|-------------|------|
| Carbon      | 0.12 |
| Manganese   | 1.75 |
| Silicon     | 0.9  |
| Sulphur     | 0.03 |
| Phosphorous | 0.03 |
| Chromium    | 0.2  |
| Nickel      | 0.5  |
| Molybdenum  | 0.30 |
| Copper      | 0.5  |

| MECHANICAL PROPERTIES | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 480 MPa   |
| Yield strength        | 400 MPa   |
| Elongation            | 22%       |

| PRODUCT CODE  | DESCRIPTION                                  | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|---------------|----------------------------------------------|-----------|--------------|-----------|
| E70C-6M-1.2-M | TAURUS E70C-6M - METAL CORE MIG WIRE - 1.2MM | 1.2       | 15           | -         |



TAURUS MIG 308LSi is used to weld 18/8 stainless steels including 301, 302, 303, nitrogen bearing 304LN and similar. Service temperatures are typically -100°C to about 400°C. Applications can be found in brewery, food, architectural and general fabrication industries.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER308LSi  
EN 14343-A G/W 19 9 Lsi  
EN 14343-B SS 308LSi

| COMPOSITION    | %     |
|----------------|-------|
| Carbon         | 0.01  |
| Manganese      | 1.7   |
| Silicon        | 0.8   |
| Phosphorous    | 0.015 |
| Sulphur        | 0.01  |
| Chromium       | 20    |
| Nickel         | 10    |
| Molybdenum     | 0.1   |
| Copper         | 0.15  |
| Ferrite number | 10    |

| MECHANICAL            | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 570 MPa   |
| 0.2% Proof stress     | 435 MPa   |
| Elongation on 4d      | 42%       |
| Impact energy @ -20°C | 30 - 60 J |

| PRODUCT CODE    | DESCRIPTION                          | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|-----------------|--------------------------------------|-----------|--------------|-----------|
| 308LSi-0.8-SM-M | TAURUS S/S MIG WIRE 308LSi-0.8-SMALL | 0.8       | 5            | -         |
| 308LSi-0.8-M    | TAURUS S/S MIG WIRE 308LSi-0.8MM     | 0.8       | 15           | -         |
| 308LSi-0.9-M    | TAURUS S/S MIG WIRE 308LSi-0.9MM     | 0.9       | 15           | -         |
| 308LSi-1.0-M    | TAURUS S/S MIG WIRE 308LSi-1.0MM     | 1.0       | 15           | -         |
| 308LSi-1.2-M    | TAURUS S/S MIG WIRE 308LSi-1.2MM     | 1.2       | 15           | -         |



TAURUS MIG 309LSi is mainly used under high dilution conditions, particularly dissimilar welds between stainless and manganese steels. There are three main areas of application: buffer layers and clad steels, dissimilar joints and similar metal joints.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER309LSi

EN ISO 14343-A 23 12 L Si

EN ISO 14343-B 309L Si

| COMPOSITION    | %     |
|----------------|-------|
| Carbon         | 0.015 |
| Manganese      | 1.7   |
| Silicon        | 0.8   |
| Phosphorous    | 0.015 |
| Sulphur        | 0.005 |
| Chromium       | 23.5  |
| Nickel         | 13    |
| Molybdenum     | 0.1   |
| Copper         | 1.15  |
| Ferrite number | 12    |

| MECHANICAL            | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 560 MPa   |
| 0.2% Proof stress     | 430 MPa   |
| Elongation on 4d      | 42%       |
| Elongation on 5d      | 39 %      |
| Impact energy @ -20°C | 80 J      |
| Impact energy @ +20°C | 100 J     |

| PRODUCT CODE    | DESCRIPTION                                              | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|-----------------|----------------------------------------------------------|-----------|--------------|-----------|
| 309LSi-0.9-SM-M | TAURUS S/S MIG WIRE 309LSi-0.9MM-SMALL PER KG/5 KG SPOOL | 0.9       | 5            | -         |
| 309LSi-0.8-M    | TAURUS S/S MIG WIRE 309LSi-0.8MM                         | 0.8       | 15           | -         |
| 309LSi-0.9-M    | TAURUS S/S MIG WIRE 309LSi-0.9MM                         | 0.8       | 15           | -         |
| 309LSi-1.0-M    | TAURUS S/S MIG WIRE 309LSi-1.0MM                         | 0.9       | 15           | -         |
| 309LSi-1.2-M    | TAURUS S/S MIG WIRE 309LSi-1.2MM                         | 1.0       | 15           | -         |



TAURUS MIG 310 wire has good oxidation resistance at high temperatures due to its high content of Chromium. The alloy is widely used for welding heat resistant austenitic steels of the 25% Chromium and 20% Nickel types and therefore sensitive to hot cracking. Common applications are industrial furnaces and boiler parts as well as heat exchangers.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 : ER310

EN ISO 14343-A : G 25 20

| COMPOSITION | %    |
|-------------|------|
| Carbon      | 0.10 |
| Manganese   | 1.60 |
| Silicon     | 0.4  |
| Chromium    | 25.8 |
| Nickel      | 20.7 |

| MECHANICAL PROPERTIES | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 590 MPa   |
| Yield strength        | 390 MPa   |
| Elongation            | 43%       |

| PRODUCT CODE | DESCRIPTION                   | SIZE  | PACKAGE | BULK |
|--------------|-------------------------------|-------|---------|------|
| 310-1.2-M    | TAURUS S/S MIG WIRE 310-1.2MM | 1.2mm | 15      | -    |



TAURUS MIG 312 wire has good oxidation resistance at high temperatures due to its high content of Chromium. The alloy is widely used for joining dissimilar steels, especially if one of the components is fully austenitic, and for steels that are difficult to weld, like for example machine components, tools and austenitic manganese steels.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER312

EN ISO 14343-A : G 29 9

| COMPOSITION | %    |
|-------------|------|
| Carbon      | 0.10 |
| Manganese   | 1.60 |
| Silicon     | 0.4  |
| Sulphur     | -    |
| Phosphorous | -    |
| Chromium    | 30.7 |
| Nickel      | 8.8  |
| Molybdenum  | 0.20 |
| Copper      | 0.14 |

| MECHANICAL PROPERTIES | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 770 MPa   |
| Yield strength        | 610 MPa   |
| Elongation            | 20%       |

| PRODUCT CODE | DESCRIPTION                   | SIZE  | PACKAGE | BULK |
|--------------|-------------------------------|-------|---------|------|
| 312-1.2-M    | TAURUS S/S MIG WIRE 312-1.2MM | 1.2mm | 15      | -    |





TAURUS MIG 316LSi is used for molybdenum-bearing austenitic stainless steels with 1.5 - 3 % molybdenum. Type 316/316L steels are widely used for their good resistance to pitting, many acids and general corrosion.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER316LSi

EN ISO 14343-A G/W 19 12 3 LSi

EN ISO 14343-B 316L Si

| COMPOSITION    | %     |
|----------------|-------|
| Carbon         | 0.01  |
| Manganese      | 1.7   |
| Silicon        | 0.8   |
| Phosphorous    | 0.015 |
| Sulphur        | 0.01  |
| Chromium       | 18.5  |
| Nickel         | 12.8  |
| Molybdenum     | 2.6   |
| Copper         | 0.15  |
| Ferrite number | 6     |

| MECHANICAL             | AS WELDED |
|------------------------|-----------|
| Tensile strength       | 570 MPa   |
| 0.2% Proof stress      | 435 MPa   |
| Elongation on 4d       | 42%       |
| Elongation on 5d       | 40 %      |
| Impact energy @ -130°C | < 70 J    |
| Impact energy @ -196°C | 30 - 60 J |

| PRODUCT CODE     | DESCRIPTION                                | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|------------------|--------------------------------------------|-----------|--------------|-----------|
| 316LSi-0.8-SM-M  | TAURUS S/S MIG WIRE 316LSi-0.8MM-SMALL     | 0.8       | 5            | -         |
| 316LSi-0.9-1KG-M | TAURUS S/S MIG WIRE 316LSi-0.9MM-1KG SPOOL | 0.9       | 1            | -         |
| 316LSi-1.0-SM-M  | TAURUS S/S MIG WIRE 316LSi-1.0MM-SMALL     | 1.0       | 5            | -         |
| 316LSi-0.8-M     | TAURUS S/S MIG WIRE 316LSi-0.8MM           | 0.8       | 15           | -         |
| 316LSi-0.9-M     | TAURUS S/S MIG WIRE 316LSi-0.9MM           | 0.9       | 15           | -         |
| 316LSi-1.0-M     | TAURUS S/S MIG WIRE 316LSi-1.0MM           | 1.0       | 15           | -         |
| 316LSi-1.2-M     | TAURUS S/S MIG WIRE 316LSi-1.2MM           | 1.2       | 15           | -         |
| 316LSi-1.6-M     | TAURUS S/S MIG WIRE 316LSi-1.6MM           | 1.6       | 15           | -         |



The TAURUS 2209 is used for welding duplex stainless steels such as 2205 and 2304. It can also be used for welding duplex stainless steels to carbon steel. It is used for MIG/MAG welding.

#### WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

#### CLASSIFICATIONS

AWS A5.9 ER2209

EN ISO 14343-A G 22 9 3 N L

EN ISO 14343-B 2209

| COMPOSITION    | %      |
|----------------|--------|
| Carbon         | 0.012  |
| Manganese      | 1.5    |
| Silicon        | 0.5    |
| Phosphorous    | 0.017  |
| Sulphur        | 0.0007 |
| Chromium       | 23     |
| Nickel         | 8.6    |
| Molybdenum     | 3.2    |
| Copper         | 0.09   |
| Ferrite number | 55     |

| MECHANICAL       | AS WELDED |
|------------------|-----------|
| Tensile strength | 770 MPa   |
| Yield strength   | 550 MPa   |
| Elongation       | 30 %      |

| PRODUCT CODE | DESCRIPTION                    | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|--------------------------------|-----------|--------------|-----------|
| 2209-1.2-M   | TAURUS S/S MIG WIRE 2209-1.2MM | 1.2       | 15           | -         |



TAURUS ALUMINIUM MIG 4043 is a 95% aluminium, 5% silicon wire suitable for welding heat treatable base alloys, and more specifically, the 6XXX series. It has a lower melting point and more fluidity than the 5XXX series filler alloys and is preferred by welders because of its favourable operating characteristics. The ER4043 wires are also less sensitive to weld cracking with the 6XXX series base alloys. TAURUS ALUMINIUM MIG 4043 is suitable for spray-arc and pulsed-arc transfer.

## APPLICATIONS

Applications in the construction and automotive industry.

## MATERIALS TO BE WELDED

TAURUS ALUMINIUM MIG 4043 wire is used to weld most aluminium alloys containing up to 7% silicon and can be used for welding wrought to cast aluminium materials.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.10 ER4043

EN ISO 18273 Al4043 (AlSi5)

| COMPOSITION | %          |
|-------------|------------|
| Silicon     | 4.5 - 5.5  |
| Iron        | 0.4 Max    |
| Copper      | 0.05 Max   |
| Manganese   | 0.05 Max   |
| Magnesium   | 0.05 Max   |
| Zinc        | 0.1 Max    |
| Titanium    | 0.15 Max   |
| Beryllium   | 0.0008 Max |
| Aluminium   | Balance    |

| MECHANICAL        | AS WELDED |
|-------------------|-----------|
| Tensile strength  | 120 MPa   |
| 0.2% Proof stress | 40 MPa    |
| Elongation on 5d  | 8         |

| PRODUCT CODE     | DESCRIPTION                                | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|------------------|--------------------------------------------|-----------|--------------|-----------|
| 4043-0.9-0.5KG-M | TAURUS ALUMINIUM MIG WIRE 4043-0.9MM-0.5KG | 0.9       | 0.5          | -         |
| 4043-0.9-2KG-M   | TAURUS ALUMINIUM MIG WIRE 4043-0.9MM-2KG   | 0.9       | 2            | -         |
| 4043-0.9-M       | TAURUS ALUMINIUM MIG WIRE 4043-0.9MM       | 0.9       | 7            | -         |
| 4043-1.0-M       | TAURUS ALUMINIUM MIG WIRE 4043-1.0MM       | 1.0       | 7            | -         |
| 4043-1.2-M       | TAURUS ALUMINIUM MIG WIRE 4043-1.2MM       | 1.2       | 7            | -         |
| 4043-1.6-M       | TAURUS ALUMINIUM MIG WIRE 4043-1.6MM       | 1.6       | 7            | -         |



TAURUS ALUMINIUM MIG 5356 is a 95% aluminium, 5% magnesium wire for general purpose welding of the 5XXX series alloys when 40 000 psi tensile strength is not required. TAURUS ALUMINIUM MIG 5356 is suitable for spray-arc and pulsed-arc transfer.

## APPLICATIONS

Applications found in the construction of ships, bulk container, railway and the automotive industries.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.10 ER5356

EN ISO 18273 Al5356 (AlMg5Cr)

| COMPOSITION | %           |
|-------------|-------------|
| Silicon     | 0.25 Max    |
| Iron        | 0.4 Max     |
| Copper      | 0.05 Max    |
| Manganese   | 0.1 - 0.2   |
| Magnesium   | 4.5 - 5.6   |
| Zinc        | 0.1 Max     |
| Titanium    | 0.07 - 0.15 |
| Beryllium   | 0.0008 Max  |
| Chromium    | 0.1 - 0.3   |
| Aluminium   | Balance     |

| MECHANICAL        | AS WELDED |
|-------------------|-----------|
| Tensile strength  | 125 MPa   |
| 0.2% Proof stress | 240 MPa   |
| Elongation on 5d  | 17        |

| PRODUCT CODE | DESCRIPTION                          | SIZE | PACKAGE | BULK |
|--------------|--------------------------------------|------|---------|------|
| 5356-0.9-M   | TAURUS ALUMINIUM MIG WIRE 5356-0.9MM | 0.9  | 7       | -    |
| 5356-1.0-M   | TAURUS ALUMINIUM MIG WIRE 5356-1.0MM | 1.0  | 7       | -    |
| 5356-1.2-M   | TAURUS ALUMINIUM MIG WIRE 5356-1.2MM | 1.2  | 7       | -    |



Taurus aluminium-bronze MIG wire is an intermediate-strength alloy with improved resistance to wear and brazing. It is used for aluminium-bronze plate fabrications and for dissimilar metals such as cast iron, carbon steels, copper as well as copper-nickel materials.

## APPLICATIONS

Applications include wear-surface reconstruction, casting repair(s), general maintenance and galvanized sheet-metal fabrication when high-strength welds are required.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical • Vertical up
- Vertical down • Overhead

## CLASSIFICATIONS

AWS A5.7 ERcAl-A2

EN ISO 24373 Cu6180 CuAl10Fe

| COMPOSITION | %          |
|-------------|------------|
| Copper      | Balance    |
| Aluminium   | 8.5 - 11.0 |
| Iron        | 0.5 - 1.5  |
| Lead        | 0.02 max   |
| Silicon     | 0.10 max   |
| Zinc        | 0.02 max   |

| MECHANICAL          | AS WELDED                |
|---------------------|--------------------------|
| Solids-temperature  | 1030°C                   |
| Density             | 7.6kg/dm <sup>3</sup>    |
| Elongation          | 0.35                     |
| Liquids-temperature | 1040°C - 1090°C          |
| Tensile strength    | 390-500N/mm <sup>2</sup> |
| Brinell hardness    | 140HB                    |

| PRODUCT CODE | DESCRIPTION                            | SIZE | PACKAGE | BULK |
|--------------|----------------------------------------|------|---------|------|
| ERCUAL-1.2-M | TAURUS ALUMINIUM BRONZE MIG WIRE-1.2MM | 1.2  | 15      | 1080 |



TAURUS MIG SILICON BRONZE is a pure copper filler wire deoxidised with 3% silicon for welding a wide range of copper alloys including overlaying of steels and cast irons. The wire is optimised for laser brazing.

## APPLICATIONS

Applications include plate for chemical plant and moulds, stills and calorifiers, rods and wires for electrical components and tubes for heat exchangers. Also excellent for MIG brazing and laser brazing onto galvanised steel for automotive body panels.

## MATERIALS TO BE WELDED

General purpose including phosphorous deoxidised copper, silicon bronze, nickel silver and some brasses.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.7 ERCuSi-A  
DIN 1733 SG-CuSi3 (2, 1461)  
BS 2901Pt3 C9  
EN 24343 Cu6560 CuSi3Mn1

| COMPOSITION | %          |
|-------------|------------|
| Silicon     | 4.5 - 5.5  |
| Iron        | 0.4 Max    |
| Manganese   | 0.75 - 1.5 |
| Phosphorous | 0.02 Max   |
| Zinc        | 0.02 Max   |
| Tin         | 0.2 Max    |
| Lead        | 0.02 Max   |
| Aluminium   | 0.01 Max   |
| Iron        | 0.3 Max    |
| Copper      | Balance    |

| MECHANICAL PROPERTIES | AS WELDED     |
|-----------------------|---------------|
| Tensile strength      | 330 - 370 MPa |
| Elongation on 5d      | 40 Max        |
| Hardness              | 80 - 90 HB    |

| PRODUCT CODE     | DESCRIPTION                             | SIZE | PACKAGE | BULK |
|------------------|-----------------------------------------|------|---------|------|
| ERCUSI-0.8-5KG-M | TAURUS SILICON BRONZE MIG WIRE-0.8MM-SM | 0.8  | 5       | -    |
| ERCUSI-1.0-5KG-M | TAURUS SILICON BRONZE MIG WIRE-1.0MM-SM | 1.0  | 5       | -    |
| ERCUSI-1.2-5KG-M | TAURUS SILICON BRONZE MIG WIRE 1.2MM-SM | 1.2  | 5       | -    |
| ERCUSI-0.8-M     | TAURUS SILICON BRONZE MIG WIRE-0.8MM    | 0.8  | 15      | -    |
| ERCUSI-1.0-M     | TAURUS SILICON BRONZE MIG WIRE-1.0MM    | 1.0  | 15      | -    |
| ERCUSI-1.2-M     | TAURUS SILICON BRONZE MIG WIRE 1.2MM    | 1.2  | 15      | -    |





TAURUS MIG HRC58 is a shielded flux-cored wire for the hard-facing of parts subjected to extreme wear such as excavator parts, scraper blades, dipper teeth, worm conveyors, beaters, crusher jaws, crusher cones, subjected to heavy wear. The weld metal is tough, free of cracks and therefore resistant to shock and impact. Machining is only possible by grinding.

## WELDING POSITIONS

• Downhand • Horizontal flat

## CLASSIFICATIONS

EN 14700 T Fe8

| COMPOSITION | %           |
|-------------|-------------|
| Carbon      | 0.35 - 0.45 |
| Manganese   | 1.50 - 2.50 |
| Silicon     | 0.30 - 0.70 |
| Phosphorous | ≤ 0.030     |
| Sulphur     | ≤ 0.030     |
| Chromium    | 5.0 - 6.0   |
| Molybdenum  | 1.4 - 1.6   |
| Vanadium    | 0.4 - 0.5   |

| MECHANICAL PROPERTIES | AS WELDED   |
|-----------------------|-------------|
| Hardness              | 57 - 62 HRC |

| PRODUCT CODE | DESCRIPTION            | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|------------------------|-----------|--------------|-----------|
| HRC58-1.2-M  | TAURUS FCW HRC58-1.2MM | 1.2       | 15           | 1080      |



The TAURUS PRO MIG Ni99 wire is a nickel-based welding wire extensively employed to repair grey iron castings as well as for joining cast irons to mild steels and stainless steels. It can also be used for overlay and buildup. A preheat and inter-pass temperature of 175°C minimum is recommended during welding. It offers good weldability, strong, dense weld deposits and is fully machinable. Mixed shielding gas required is 75% argon/25% helium.

## WELDING POSITIONS

- All positions

## CLASSIFICATIONS

AWS A5.15 ERNi-CI

| TYPICAL COMPOSITION | %       |
|---------------------|---------|
| Carbon              | 0.038   |
| Manganese           | 0.24    |
| Silicon             | 0.44    |
| Sulphur             | 0.009   |
| Iron                | 0.010   |
| Copper              | 0.02    |
| Nickel              | Balance |

| MECHANICAL PROPERTIES | AS WELDED     |
|-----------------------|---------------|
| Tensile strength      | 530 Mpa (max) |
| Yield strength        | 344 Mpa (max) |
| Elongation in 2"      | 6 - 12%       |

| PRODUCT CODE | DESCRIPTION                             | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|-----------------------------------------|-----------|--------------|-----------|
| NI99-1.2-M   | TAURUS PRO NICKELCAST MIG WIRE 99-1.2MM | 1.2       | 15           | -         |



TAURUS TIG 70S-6 rod is produced from high quality deoxidised rod. The products are copper coated for increased shelf life.

## WELDING PROCEDURE

TAURUS TIG 70S-6 rod should be used with a 2% thoriated (red colour tip) tungsten electrode with pure argon as a shielding gas at flow rates of 10 - 15 l/min.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.18 ER 70s-6

SABS 145 Grade A

EN ISO 14341 G42 2 C G4Si1

EN ISO 636-A W 42 3 W4Si1

EN ISO 636-B W 49 3 W4Si1

| COMPOSITION | VALUE                       |
|-------------|-----------------------------|
| Carbon      | 0.07 - 0.15 %               |
| Manganese   | 1.4 - 1.85 %                |
| Silicon     | 0.8 - 1.15 %                |
| Sulphur     | 0.035 % Max                 |
| Phosphorous | 0.03 % Max                  |
| Copper      | Typical 0.18 %<br>0.4 % Max |

| MECHANICAL PROPERTIES   | AS WELDED     |
|-------------------------|---------------|
| 0.2% Proof stress       | 420 MPa min   |
| Tensile strength        | 510 - 570 MPa |
| Elongation on 50mm      | 26 min        |
| Charpy V-Notch at +20°C | 110 J min     |
| Charpy V-Notch at -29°C | 50 J min      |
| Charpy V-Notch at -46°C | 27 J min      |

| PRODUCT CODE  | DESCRIPTION                           | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|---------------|---------------------------------------|------------|--------------|-----------|
| ER70S-6-1.6-T | TAURUS MILD STEEL TIG ROD 70S-6-1.6MM | 1.6 x 1000 | 5            | 20        |
| ER70S-6-2.0-T | TAURUS MILD STEEL TIG ROD 70S-6-2.0MM | 2.0 x 1000 | 5            | 20        |
| ER70S-6-2.4-T | TAURUS MILD STEEL TIG ROD 70S-6-2.4MM | 2.4 x 1000 | 5            | 20        |
| ER70S-6-3.2-T | TAURUS MILD STEEL TIG ROD 70S-6-3.2MM | 3.2 x 1000 | 5            | 20        |



TAURUS TIG 308L rod is used for welding 18/8 stainless steels including 301, 302, 303, nitrogen-bearing 304LN and similar. Service temperatures are typically -100°C to approximately 400°C.

## APPLICATIONS

Applications can be found in the brewery, food, architectural and general fabrication industries.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER308L  
EN ISO 14343-A G/W 19 9 L  
EN ISO 14343-B SS 308L

| COMPOSITION    | %           |
|----------------|-------------|
| Carbon         | 0.03 Max    |
| Manganese      | 1.0 - 2.5   |
| Silicon        | 0.3 - 0.65  |
| Sulphur        | 0.03 Max    |
| Phosphorous    | 0.03 Max    |
| Chromium       | 19.5 - 22.0 |
| Nickel         | 9 - 11      |
| Ferrite Number | 10          |

| MECHANICAL PROPERTIES   | AS WELDED    |
|-------------------------|--------------|
| Tensile strength        | 605 MPa      |
| 0.2% Proof stress       | 465 MPa      |
| Elongation on 4d        | 35 %         |
| Impact energy at -196°C | 80 J         |
| Hardness                | 200 - 220 HV |

| PRODUCT CODE | DESCRIPTION                   | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------|------------|--------------|-----------|
| 308L-1.6-T   | TAURUS S/S TIG ROD 308L-1.6MM | 1.6 x 1000 | 5            | 20        |
| 308L-2.0-T   | TAURUS S/S TIG ROD 308L-2.0MM | 2.0 x 1000 | 5            | 20        |
| 308L-2.4-T   | TAURUS S/S TIG ROD 308L-2.4MM | 2.4 x 1000 | 5            | 20        |
| 308L-3.2-T   | TAURUS S/S TIG ROD 308L-3.2MM | 3.2 x 1000 | 5            | 20        |



TAURUS TIG 309L rod is mainly used under high dilution conditions, particularly dissimilar welds between stainless and CMn steels. There are three main areas of application: buffer layers and clad steels, dissimilar joints and similar metal joints.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER309L

EN ISO 14343-A G/W 23 12 L

EN ISO 14343-B SS 309L

| COMPOSITION    | %          |
|----------------|------------|
| Carbon         | 0.03 Max   |
| Manganese      | 1.0 - 2.5  |
| Silicon        | 0.3 - 0.65 |
| Sulphur        | 0.02 Max   |
| Phosphorous    | 0.02 Max   |
| Chromium       | 12 - 14    |
| Nickel         | 23 - 25    |
| Ferrite Number | 6 - 12     |

| MECHANICAL PROPERTIES  | AS WELDED    |
|------------------------|--------------|
| Tensile strength       | 590 MPa      |
| 0.2% Proof stress      | 450 MPa      |
| Elongation on 4d       | 43 %         |
| Elongation on 5d       | 41 %         |
| Impact energy at +20°C | >200 J       |
| Hardness               | 205 - 250 HV |

| PRODUCT CODE | DESCRIPTION                   | SIZE       | PACKAGE | BULK |
|--------------|-------------------------------|------------|---------|------|
| 309L-1.6-T   | TAURUS S/S TIG ROD 309L-1.6MM | 1.6 x 1000 | 5       | 20   |
| 309L-2.0-T   | TAURUS S/S TIG ROD 309L-2.0MM | 2.0 x 1000 | 5       | 20   |
| 309L-2.4-T   | TAURUS S/S TIG ROD 309L-2.4MM | 2.4 x 1000 | 5       | 20   |
| 309L-3.2-T   | TAURUS S/S TIG ROD 309L-3.2MM | 3.2 x 1000 | 5       | 20   |



TAURUS TIG 312 rod has good oxidation resistance at high temperatures due to its high content of Chromium. The alloy is widely used for joining dissimilar steels, especially if one of the components is fully austenitic, and for steels that are difficult to weld, like for example machine components, tools and austenitic manganese steels.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER312

EN ISO 14343-A W 29 9

| COMPOSITION | %    |
|-------------|------|
| Carbon      | 0.10 |
| Manganese   | 1.60 |
| Silicon     | 0.4  |
| Sulphur     | -    |
| Phosphorous | -    |
| Chromium    | 30.7 |
| Nickel      | 8.8  |
| Molybdenum  | 0.20 |
| Copper      | 0.14 |

| MECHANICAL PROPERTIES | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 770 MPa   |
| Yield strength        | 610 MPa   |
| Elongation            | 20%       |

| PRODUCT CODE | DESCRIPTION                  | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|------------------------------|------------|--------------|-----------|
| 312-1.60-T   | TAURUS S/S TIG ROD 312-1.6MM | 1.6 x 1000 | 5            | 20        |
| 312-2.40-T   | TAURUS S/S TIG ROD 312-2.4MM | 2.4 x 1000 | 5            | 20        |





TAURUS TIG 316L rod is used for molybdenum-bearing austenitic stainless steels with 1.5- 3 % molybdenum. Type 316/316L steels are widely used for its good resistance to pitting, many acids and general corrosion.

## WELDING POSITIONS

- Down hand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.9 ER316L

EN ISO 14343-A G/W 19 12 3 L

EN ISO 14343-B SS 316L

| COMPOSITION    | %          |
|----------------|------------|
| Carbon         | 0.03 Max   |
| Manganese      | 1.0 - 2.5  |
| Silicon        | 0.3 - 0.65 |
| Sulphur        | 0.03 Max   |
| Phosphorous    | 0.03 Max   |
| Chromium       | 18 - 20    |
| Nickel         | 11 - 14    |
| Molybdenum     | 2 - 3      |
| Ferrite number | 3 - 10     |

| MECHANICAL PROPERTIES   | AS WELDED |
|-------------------------|-----------|
| Tensile strength        | 605 MPa   |
| 0.2% Proof stress       | 465 MPa   |
| Elongation on 4d        | 35 %      |
| Impact energy at -130°C | > 100 J   |
| Impact energy at -196°C | > 60 J    |

| PRODUCT CODE | DESCRIPTION                   | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------|------------|--------------|-----------|
| 316L-1.0-T   | TAURUS S/S TIG ROD 316L-1.0MM | 1.0 x 1000 | 5            | 20        |
| 316L-1.2-T   | TAURUS S/S TIG ROD 316L-1.2MM | 1.2 x 1000 | 5            | 20        |
| 316L-1.6-T   | TAURUS S/S TIG ROD 316L-1.6MM | 1.6 x 1000 | 5            | 20        |
| 316L-2.0-T   | TAURUS S/S TIG ROD 316L-2.0MM | 2.0 x 1000 | 5            | 20        |
| 316L-2.4-T   | TAURUS S/S TIG ROD 316L-2.4MM | 2.4 x 1000 | 5            | 20        |
| 316L-3.2-T   | TAURUS S/S TIG ROD 316L-3.2MM | 3.2 x 1000 | 5            | 20        |



The TAURUS TIG 2209 is used for welding duplex stainless steels such as 2205 and 2304. It can also be used for welding duplex stainless steels to carbon steel. It is used for TIG welding.

#### WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

#### CLASSIFICATIONS

AWS A5.9 ER2209

EN ISO 14343-A : W 22 9 3 N L

| COMPOSITION    | %    |
|----------------|------|
| Carbon         | 0.01 |
| Manganese      | 1.5  |
| Silicon        | 0.5  |
| Nitrogen       | 0.17 |
| Chromium       | 22.7 |
| Nickel         | 8.5  |
| Molybdenum     | 3.2  |
| Ferrite number | 55   |

| MECHANICAL       | AS WELDED |
|------------------|-----------|
| Tensile strength | 765 MPa   |
| Yield strength   | 600 MPa   |
| Elongation       | 28 %      |

| PRODUCT CODE | DESCRIPTION                   | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------|-----------|--------------|-----------|
| 2209-1.6-T   | TAURUS S/S TIG ROD 2209-1.6MM | 1.6       | 5            | 20        |
| 2209-2.4-T   | TAURUS S/S TIG ROD 2209-2.4MM | 2.4       | 5            | 20        |



TAURUS TIG 4043 is a 95% aluminium, 5% silicon rod suitable for welding heat treatable base alloys. It has a lower melting point and more fluidity and is preferred by welders because of its favourable operating characteristics. The ER4043 rod is also less sensitive to weld cracking. TAURUS TIG 4043 should be used with a zirconated tungsten electrode with pure argon or an argon-helium mixture for thick sections, at a flow rates of 10 - 15 l/min. For oxygen and acetylene gas welding, a neutral flame should be used with aluminium welding flux.

## APPLICATIONS

Applications in the construction and automotive industry.

## MATERIALS TO BE WELDED

TAURUS TIG 4043 rod is used to weld most aluminium alloys containing up to 7% silicon and can be used for welding wrought to cast aluminium materials such as: BS 1470-1475 HE19, HE15, HE20 and HE30 material BS 1490 LM2 and LM6 castings aluminium alloys (AAA). 6061, 6062, 05052, 5154, 3003, 2024, 1050 and 1100 (after anodising, welding will be of a dark grey colour).

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.10 ER4043

EN ISO 18273 Al4043 (AlSi5)

EN ISO 14343-B SS 316L

| COMPOSITION | %          |
|-------------|------------|
| Silicon     | 4.5 - 5.5  |
| Iron        | 0.4 Max    |
| Copper      | 0.05 Max   |
| Manganese   | 0.05 Max   |
| Magnesium   | 0.05 Max   |
| Zinc        | 0.1 Max    |
| Titanium    | 0.15 Max   |
| Beryllium   | 0.0008 Max |
| Aluminium   | Balance    |

| MECHANICAL PROPERTIES | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 40 MPa    |
| 0.2% Proof stress     | 120 MPa   |
| Elongation on 5d      | 8 %       |

| PRODUCT CODE | DESCRIPTION                         | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------------|------------|--------------|-----------|
| 4043-1.6-T   | TAURUS ALUMINIUM TIG ROD 4043-1.6MM | 1.6 x 1000 | 5            | 20        |
| 4043-2.4-T   | TAURUS ALUMINIUM TIG ROD 4043-2.4MM | 2.4 x 1000 | 5            | 20        |
| 4043-3.2-T   | TAURUS ALUMINIUM TIG ROD 4043-3.2MM | 3.2 x 1000 | 5            | 20        |



TAURUS TIG 5356 is a 95% aluminium, 5% magnesium rod for general purpose welding when 40 000 psi tensile strength is not required. TAURUS TIG 5356 should be used with a zirconated tungsten electrode with pure argon or an argon-helium mixture for thick sections, at a flow rates of 10 - 15 l/min. For oxy-acetylene gas welding, a neutral flame should be used with aluminium welding flux.

## APPLICATIONS

Applications in the construction of ships, bulk container, railway and the automotive industries.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.10 ER5356

EN ISO 18273 Al5356 (AlMg5)

| COMPOSITION | %           |
|-------------|-------------|
| Silicon     | 0.25 Max    |
| Iron        | 0.4 Max     |
| Copper      | 0.05 Max    |
| Manganese   | 0.1 - 0.2   |
| Magnesium   | 4.5 - 5.6   |
| Zinc        | 0.1 Max     |
| Titanium    | 0.07 - 0.15 |
| Beryllium   | 0.0008      |
| Chromium    | 0.1 - 0.3   |
| Aluminium   | Balance     |

| MECHANICAL PROPERTIES | AS WELDED |
|-----------------------|-----------|
| Tensile strength      | 240 MPa   |
| 0.2% Proof stress     | 125 MPa   |
| Elongation on 5d      | 17 %      |

| PRODUCT CODE | DESCRIPTION                         | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------------|------------|--------------|-----------|
| 5356-1.6-T   | TAURUS ALUMINIUM TIG ROD 5356-1.6MM | 1.6 x 1000 | 5            | 20        |
| 5356-2.4-T   | TAURUS ALUMINIUM TIG ROD 5356-2.4MM | 2.4 x 1000 | 5            | 20        |
| 5356-3.2-T   | TAURUS ALUMINIUM TIG ROD 5356-3.2MM | 3.2 x 1000 | 5            | 20        |

# TAURUS TIG SILICON BRONZE



TAURUS TIG SILICON BRONZE is pure copper filler rod deoxidised with 3% silicon for welding a wider range of copper alloys including overlaying of steels and cast irons. TAURUS TIG SILICON BRONZE should be shielded with pure argon but pure helium provides deeper penetration, higher travel speeds and allows reduced preheating.

## APPLICATIONS

Applications include plate for chemical plant and moulds, stills and calorifiers, rods and wires for electrical components and tubes for heat exchangers.

## MATERIALS TO BE WELDED

General purpose including phosphorous deoxidised copper, silicon bronze, nickel silver and some brasses.

## WELDING POSITIONS

- Downhand • Horizontal flat • Horizontal vertical
- Vertical up • Overhead

## CLASSIFICATIONS

AWS A5.7 ERCuSi-A

DIN 1733 SG-CuSi3 (2, 1461)

BS 2901Pt3 C9

EN 24373 CU6560 CuSiMn1

| COMPOSITION  | %          |
|--------------|------------|
| Silicon      | 2.8 - 4.0  |
| Iron         | 0.3 Max    |
| Manganese    | 0.75 - 1.5 |
| Phosphorous  | 0.02 Max   |
| Zinc         | 0.02 Max   |
| Tin          | 0.2 Max    |
| Lead         | 0.02 Max   |
| Aluminium    | 0.01 Max   |
| Other totals | 0.4 Max    |
| Copper       | Balance    |

| MECHANICAL PROPERTIES | AS WELDED     |
|-----------------------|---------------|
| Tensile strength      | 330 - 370 MPa |
| Elongation on 5d      | 40 % Max      |
| Hardness              | 80 - 90 HB    |

| PRODUCT CODE | DESCRIPTION                         | SIZE       | PACKAGE | BULK |
|--------------|-------------------------------------|------------|---------|------|
| ERCUSI-2.4-T | TAURUS SILICON BRONZE TIG ROD 2.4MM | 2.4 x 1000 | 10      | -    |
| ERCUSI-3.2-T | TAURUS SILICON BRONZE TIG ROD 3.2MM | 3.2 x 1000 | 10      | -    |



The Taurus thoriated tungsten electrodes provide excellent resistance against weld pool contamination while at the same time offer the welder easier arc starting capabilities and a more stable arc. Thoriated tungsten electrodes are the most commonly used tungsten material.

## APPLICATION

Thoriated tungsten electrodes are generally used in DC electrode negative or straight polarity applications such as carbon and stainless steels, nickel alloys and titanium, since they operate well even under amperage overloaded.

## CLASSIFICATIONS

AWS EWTh-2

### TYPICAL ELECTRODE CURRENT GUIDELINE

| TUNGSTEN SIZE | DC -        |
|---------------|-------------|
| 1.6 mm        | 70 - 150 A  |
| 2.4 mm        | 150 - 250 A |
| 3.2 mm        | 250 - 400A  |

| MATERIAL WELDED | CURRENT |
|-----------------|---------|
| Carbon steel    | DC      |
| Copper          | DC      |
| Nickel Alloys   | DC      |
| Stainless Steel | DC      |
| Titanium        | DC      |

| PRODUCT CODE | DESCRIPTION                         | SIZE (mm) | PACKAGE (UNITS) | BULK (UNITS) |
|--------------|-------------------------------------|-----------|-----------------|--------------|
| TEL.16.TH    | TAURUS THORIATED TUNGSTEN-1.6MM-RED | 1.6 x 150 | 10              | 100          |
| TEL.24.TH    | TAURUS THORIATED TUNGSTEN-2.4MM-RED | 2.4 x 150 | 10              | 100          |
| TEL.32.TH    | TAURUS THORIATED TUNGSTEN-3.2MM-RED | 3.2 x 150 | 10              | 100          |





ZIRCONIATED tungsten electrodes exhibit good performance characteristics in AC welding, especially under high-load current. These electrodes can retain a balled end when welding, which results in less tungsten permeation and good corrosion resistance. It balls up well in AC welding and has a more stable arc than pure tungsten. Displays excellent performance in high load AC welding. Not replaceable by any other electrodes. Resists contamination well in AC welding.

## APPLICATION

ZIRCONIATED tungsten is most commonly used for AC welding of aluminium and magnesium alloys. Preferred when tungsten contamination of weld is intolerable.

## CLASSIFICATIONS

AWS EWZr-1

### TYPICAL ELECTRODE CURRENT GUIDELINE

| TUNGSTEN SIZE | AC          |
|---------------|-------------|
| 1.6 mm        | 60 - 150 A  |
| 2.4 mm        | 100 - 225 A |
| 3.2 mm        | 160 - 325A  |

| MATERIAL WELDED | CURRENT |
|-----------------|---------|
| Aluminium       | AC      |
| Magnesium       | AC      |

| PRODUCT CODE | DESCRIPTION                             | SIZE (mm) | PACKAGE (UNITS) | BULK (UNITS) |
|--------------|-----------------------------------------|-----------|-----------------|--------------|
| TEL.16.ZC    | TAURUS ZIRCONIATED TUNGSTEN-1.6MM-WHITE | 1.6 x 150 | 10              | 100          |
| TEL.24.ZC    | TAURUS ZIRCONIATED TUNGSTEN-2.4MM-WHITE | 2.4 x 150 | 10              | 100          |
| TEL.32.ZC    | TAURUS ZIRCONIATED TUNGSTEN-3.2MM-WHITE | 3.2 x 150 | 10              | 100          |



The Taurus lanthanated tungsten electrode has an excellent arc-starting characteristic, a low burn-off rate, good arc stability and excellent re-ignition characteristics and is best applied at medium to high-amperage range. These electrodes have characteristics similar to the EWCe-2 product, contain lanthanum oxide (lanthana) and are non-radioactive and therefore safe to use in almost all normal conditions and environments. However, precautions must be taken when grinding or machining electrode tips containing thorium oxide. Dust particles from such operations need to be contained in order to avoid inhalation.

## APPLICATION

Lanthanated tungsten electrodes perform exceptionally well in both AC and DC current and have a low erosion rate. The electrodes are effective for welding aluminium, magnesium, copper and titanium alloys as well as low alloyed steels, stainless steel and non-corroding steels.

## CLASSIFICATIONS

AWS EWLa-1.5 (GOLD)

AWS A5.12M/A5.12:2009 (GOLD)

| TUNGSTEN SIZE | AC or DC    |
|---------------|-------------|
| 1.6 mm        | 70 - 150 A  |
| 2.4 mm        | 150 - 250 A |
| 3.2 mm        | 250 - 400A  |

| MATERIAL WELDED | CURRENT |
|-----------------|---------|
| Carbon steel    | DCEN    |
| Copper          | DCEN    |
| Nickel alloys   | DCEN    |
| Stainless steel | DCEN    |
| Titanium        | DCEN    |
| Aluminium       | AC      |
| Magnesium       | AC      |

| PRODUCT CODE | DESCRIPTION                            | SIZE      | PACKAGE | BULK |
|--------------|----------------------------------------|-----------|---------|------|
| TEL.16.LA    | TAURUS LANTHANATED TUNGSTEN-1.6MM-GOLD | 1.6 x 150 | 10      | 100  |
| TEL.24.LA    | TAURUS LANTHANATED TUNGSTEN-2.4MM-GOLD | 2.4 x 150 | 10      | 100  |
| TEL.32.LA    | TAURUS LANTHANATED TUNGSTEN-3.2MM-GOLD | 3.2 x 150 | 10      | 100  |

# TAURUS COPPER COATED ROD (CCR)



TAURUS Copper Coated Rod (CCR) is a general purpose low carbon steel gas-welding rod which is copper coated to reduce corrosion. It is recommended for oxygen-acetylene welding of mild steel and is widely used in sheet metal work, the heating and ventilation industries, car body repairs, welder training schools and for low pressure piping and plumbing.

| COMPOSITION | %           |
|-------------|-------------|
| Carbon      | 0.04 - 0.15 |
| Manganese   | 0.35 - 0.60 |
| Silicon     | 0.03 Max    |
| Sulphur     | 0.035 Max   |
| Phosphorous | 0.04        |
| Copper      | 0.35 Max    |

| MECHANICAL PROPERTIES        | AS WELDED          |
|------------------------------|--------------------|
| Melting Range                | 1490 °C            |
| Tensile strength             | ± 386 MPa          |
| Hardness                     | ± 120 HB           |
| BRAZING / WELDING PARAMETERS |                    |
| Process                      | Oxygen - Acetylene |
| Flame setting                | Neutral            |
| Flux required                | None               |

| PRODUCT CODE | DESCRIPTION      | SIZE (mm) | PACKAGE (kg) | BULK (kg) |
|--------------|------------------|-----------|--------------|-----------|
| CCR16        | TAURUS CCR 1.6MM | 1.6 x 750 | 4            | 20        |
| CCR24        | TAURUS CCR 2.4MM | 2.4 x 750 | 4            | 20        |
| CCR32        | TAURUS CCR 3.2MM | 3.2 x 750 | 4            | 20        |

# TAURUS BRONZE BRAZING ROD (BBR)



TAURUS Bronze Brazing Rod (BBR) is a widely used brazing and bronze welding rod depositing metal which has good tensile strength. This versatile brazing rod is ideally suited for sheet metal work such as vehicle bodies, tubular and galvanized iron fabrication as well as for copper and for brazing cast iron, and heavy steel sections.

The flux coated bronze brazing rod doesn't require any extra flux. The bare bronze brazing rod will required M15 flux.

## CLASSIFICATIONS

AWS A5.27 R CuZn-C

EN 24373 Cu4700 CuZn405n

| COMPOSITION | %               |
|-------------|-----------------|
| Copper      | 56 - 60         |
| Manganese   | 0.01 - 0.5      |
| Silicon     | 0.04 - 0.15 Max |
| Iron        | 0.25 - 1.2      |
| Tin         | 0.8 - 1.1       |
| Zinc        | Balance         |

| MECHANICAL PROPERTIES        | AS WELDED           |
|------------------------------|---------------------|
| Melting Range                | 860 °C              |
| Tensile strength             | ± 440 MPa           |
| Hardness                     | ± 120 HB            |
| BRAZING / WELDING PARAMETERS |                     |
| Process                      | Oxygen - Acetylene  |
| Flame setting                | Base metal depended |

| PRODUCT CODE | DESCRIPTION                          | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|--------------------------------------|------------|--------------|-----------|
|              | <b>FLUX COATED</b>                   |            |              |           |
| BBRFC2.0MM   | TAURUS FLUX COATED BRAZING ROD 2.0MM | 2.0 x 500  | 1            | -         |
| BBRFC3.0MM   | TAURUS FLUX COATED BRAZING ROD 3.0MM | 3.0 x 500  | 1            | -         |
|              | <b>BARE</b>                          |            |              |           |
| BBR-1.6      | TAURUS BRONZE BRAZING ROD 1.6MM      | 1.6 x 1000 | 5            | -         |
| BBR-2.0      | TAURUS BRONZE BRAZING ROD 2.0MM      | 2.4 x 1000 | 5            | -         |
| BBR-3.0      | TAURUS BRONZE BRAZING ROD 3.0MM      | 3.2 x 1000 | 5            | -         |

# TAURUS LOW TEMPERATURE FLUXCORED ALUMINIUM BRAZING



The Taurus ZN-AL02 is a flux cored zinc-aluminum brazing alloy that has a low brazing temperature with a good welding effect. It is used for brazing aluminum to aluminum, aluminum to copper and aluminum to stainless steel. The low brazing temperature makes brazing thinner material easier. Due to the flux-core there is no need for extra flux when brazing. Its main usages are in the field of heat-exchangers ,air conditioners and condensers and automotive refrigeration systems.

| COMPOSITION       | VALUE      |
|-------------------|------------|
| Aluminium         | 56 - 60    |
| Zinc              | 0.01 - 0.5 |
| Flux-core content | ALCsF4     |

| MATERIAL PROPERTIES                   | AS WELDED       |
|---------------------------------------|-----------------|
| Melting range                         | 430 °C - 460 °C |
| Brazing temperature                   | 480 °C          |
| Tensile strength (N/MM <sup>2</sup> ) | 130 - 160       |
| Elongation(%)                         | 60              |
| Density (g/cm <sup>3</sup> )          | 6.9             |

| PRODUCT CODE | DESCRIPTION                                           | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|-------------------------------------------------------|------------|--------------|-----------|
| ZNAL02-2.0   | TAURUS LOW TEMP FLUXCORED ALUMINIUM BRAZING ROD 2.0MM | 2.0 x 1000 | 5            | 20        |

# TAURUS HIGH TEMPERATURE FLUXCORED ALUMINIUM BRAZING



The Taurus ZN-AL12 is a silicon-aluminum flux cored brazing alloy. It's used for brazing aluminum to aluminum, aluminum to stainless steel. This new developed brazing material can be used instead of ER4047 welding rod. Due to the flux-core there is no need for extra flux when brazing which also reduces the need for cleaning the brazing line which can make it better for your aluminum product. Its main usages are in the field of heat-exchangers, air conditioners and condensers and automotive refrigeration systems.

## CLASSIFICATIONS

AWS A5.8 BAISi-4

EN1044 AL104

DIN 8513 L-AISi12

| CHEMICAL COMPOSITION | VALUE        |
|----------------------|--------------|
| Aluminium            | 88%          |
| Silicon              | 12%          |
| Flux-core content    | K3AIF6-KAIF4 |

| MATERIAL PROPERTIES | AS WELDED      |
|---------------------|----------------|
| Melting range       | 577°C - 582 °C |
| Brazing temperature | 605 °C         |

| PRODUCT CODE | DESCRIPTION                                            | SIZE (mm)  | PACKAGE (kg) | BULK (kg) |
|--------------|--------------------------------------------------------|------------|--------------|-----------|
| ZNAL12-2.0   | TAURUS HIGH TEMP FLUXCORED ALUMINIUM BRAZING ROD 2.0MM | 2.0 x 1000 | 5            | 20        |



# TAURUS SILVER SOLDER 20%



Our TAURUS SILVER SOLDER 20% which is cadmium free and is suitable for use on all ferrous and non-ferrous metals, except aluminium. It can be used with a range of heat sources and is available in bare and flux coated and in various percentages of silver. Our flux coated silver solder has a special fast-flow flux which improves base metal cleansing action.

The flux coated silver solder doesn't require any extra flux. The bare silver solder will require silver solder flux.

## CLASSIFICATIONS

AWS A5.8  
EN 1044 AG 206  
DIN 8513 L-Ag 20  
EN 17672

| COMPOSITION | %       |
|-------------|---------|
| Silver      | 20      |
| Copper      | 44      |
| Zinc        | 36      |
| Cadmium     | 0       |
| Others      | 0.2% Si |

| MECHANICAL PROPERTIES |                       |
|-----------------------|-----------------------|
| Melting Range         | 690 - 810 °C          |
| Working temperature   | 800 °C                |
| Density               | 8.7 g/cm <sup>3</sup> |
| Tensile strength      | 330 MPa               |

| PRODUCT CODE    | DESCRIPTION                                     | SIZE (mm) | PACKAGE | BULK (kg) |
|-----------------|-------------------------------------------------|-----------|---------|-----------|
|                 | <b>FLUX COATED</b>                              |           |         |           |
| SISIL20FX-6     | SILVER SOLDER-20% AG FX 1.5MM (WHITE) - 6 PIECE | 1.5 x 500 | 6 PCS   | -         |
| SISILVER20FX1.5 | SILVER SOLDER-20% AG FX 1.5MM (WHITE)           | 1.5 x 500 | 1       | -         |
|                 | <b>BARE</b>                                     |           |         |           |
| SISIL20B15-6    | SILVER SOLDER-20% AG BARE 1.5MM - 6 PIECE       | 1.5 x 500 | 6 PCS   | -         |
| SISILVER20B-1.5 | SILVER SOLDER-20% AG BARE 1.5MM                 | 1.5 x 500 | 1       | -         |

# TAURUS SILVER SOLDER 30%



Our TAURUS SILVER SOLDER 30% which is cadmium free and is suitable for use on all ferrous and non-ferrous metals, except aluminium. It can be used with a range of heat sources and is available in bare and flux coated and in various percentages of silver. Our flux coated silver solder has a special fast-flow flux which improves base metal cleansing action.

The flux coated silver solder doesn't require any extra flux. The bare silver solder will require silver solder flux.

## CLASSIFICATIONS

AWS A5.8  
EN 1044 AG 107  
DIN 8513 L-Ag 30 Sn  
EN 17672 Ag 130

| COMPOSITION | %  |
|-------------|----|
| Silver      | 30 |
| Copper      | 36 |
| Zinc        | 32 |
| Tin         | 2  |
| Cadmium     | 0  |

| MECHANICAL PROPERTIES |                       |
|-----------------------|-----------------------|
| Melting Range         | 680 - 765 °C          |
| Working temperature   | 750 °C                |
| Density               | 8.9 g/cm <sup>3</sup> |
| Tensile strength      | 460 MPa               |

| PRODUCT CODE    | DESCRIPTION                                    | SIZE (mm) | PACKAGE | BULK (kg) |
|-----------------|------------------------------------------------|-----------|---------|-----------|
|                 | <b>FLUX COATED</b>                             |           |         |           |
| SISIL30FX-6     | SILVER SOLDER-30% AG FX 1.5MM (BLUE) - 6 PIECE | 1.5 x 500 | 6 PCS   | -         |
| SISILVER30FX1.5 | SILVER SOLDER-30% AG FX 1.5MM (BLUE)           | 1.5 x 500 | 1       | -         |
|                 | <b>BARE</b>                                    |           |         |           |
| SISIL30B15-6    | SILVER SOLDER-30% AG BARE 1.5MM - 6 PIECE      | 1.5 x 500 | 6 PCS   | -         |
| SISILVER30B-1.5 | SILVER SOLDER-30% AG BARE 1.5MM                | 1.5 x 500 | 1       | -         |

# TAURUS SILVER SOLDER 40%



Our TAURUS SILVER SOLDER 40% which is cadmium free and is suitable for use on all ferrous and non-ferrous metals, except aluminium. It can be used with a range of heat sources and is available in bare and flux coated and in various percentages of silver. Our flux coated silver solder has a special fast flow-flux which improves base metal cleansing action.

The flux coated silver solder doesn't require any extra flux. The bare silver solder will require silver solder flux.

## CLASSIFICATIONS

AWS A5.8 B Ag 28

EN 1044 AG 105

DIN 8513 L-Ag 40 Sn

EN 17672 Ag 140

| COMPOSITION | %  |
|-------------|----|
| Silver      | 40 |
| Copper      | 30 |
| Zinc        | 28 |
| Tin         | 2  |
| Cadmium     | 0  |

| MECHANICAL PROPERTIES |                       |
|-----------------------|-----------------------|
| Melting Range         | 640 - 700 °C          |
| Working temperature   | 690 °C                |
| Density               | 9.1 g/cm <sup>3</sup> |
| Tensile strength      | 430 MPa               |

| PRODUCT CODE    | DESCRIPTION                                      | SIZE (mm) | PACKAGE | BULK (kg) |
|-----------------|--------------------------------------------------|-----------|---------|-----------|
|                 | <b>FLUX COATED</b>                               |           |         |           |
| SISIL40FX-6     | SILVER SOLDER-40% AG FX 1.5MM (YELLOW) - 6 PIECE | 1.5 x 500 | 6 PCS   | -         |
| SISILVER40FX1.5 | SILVER SOLDER-40% AG FX 1.5MM (YELLOW)           | 1.5 x 500 | 1       | -         |
|                 | <b>BARE</b>                                      |           |         |           |
| SISIL40B15-6    | SILVER SOLDER-40% AG BARE 1.5MM - 6 PIECE        | 1.5 x 500 | 6 PCS   | -         |
| SISILVER40B-1.5 | SILVER SOLDER-40% AG BARE 1.5MM                  | 1.5 x 500 | 1       | -         |



Our TAURUS COPPER BRAZE is a copper based filler metal that is self-fluxing on copper by virtue of its phosphorous content. Because of its self-fluxing nature, time and money is saved as a result of the elimination of necessary steps to flux a joint before brazing. However, copper alloys such as brass and bronze should be fluxed with our Taurus Flux to assure a sound braze joint. While this filler metal is widely used in the air conditioning and plumbing industries, it is not recommended for ferrous or nickel-based materials because the joint will become brittle and may fail. The copper phosphor alloys vary in silver content from 18% to 2% and the percentage of silver and phosphorous does change the melt and flow characteristics of the filler metal.

| SPECIFICATION       | COPPER BRAZE 5<br>5% SILVER                                                       | COPPER BRAZE 2<br>2% SILVER                                                | COPPER BRAZE 6<br>0% SILVER                                                | COPPER BRAZE 7<br>0% SILVER                                              |
|---------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Silver              | 5                                                                                 | 2                                                                          | -                                                                          | -                                                                        |
| Copper              | 89                                                                                | 91.7                                                                       | 93.8                                                                       | 93                                                                       |
| Phosphorus          | 6                                                                                 | 6.3                                                                        | 6.2                                                                        | 7                                                                        |
| Melting range       | 645 - 815 °C                                                                      | 645 - 825 °C                                                               | 710 - 890 °C                                                               | 710 - 820 °C                                                             |
| Working temperature | 710 °C                                                                            | 740 °C                                                                     | 760 °C                                                                     | 730 °C                                                                   |
| CLASSIFICATION      | AWS A5.8M / A5.8 BBuP-3<br>EN 1044 CP 104<br>DIN 8513 L-Ag5P<br>ISO 17672 CuP 281 | AWS A5.8M / A5.8<br>EN 1044 CP 105<br>DIN 8513 L-Ag2P<br>ISO 17672 CuP 279 | AWS A5.8M / A5.8<br>EN 1044 CP 203<br>DIN 8513 L-CuP6<br>ISO 17672 CuP 179 | AWS A5.8M / A5.8<br>EN 1044 CP 202<br>DIN 8513 L-Cu<br>ISO 17672 CuP 180 |

| PRODUCT CODE    | DESCRIPTION                    | SIZE      | PACKAGE | BULK |
|-----------------|--------------------------------|-----------|---------|------|
|                 | <b>0% SILVER</b>               |           |         |      |
| FOSOP7-2.0      | COPPERBRAZE-0% AG 2.0MM-SQUARE | 2.0 x 500 | 1       | -    |
| FOSOP6-2.0-100G | COPPERBRAZE-0% AG 2.0MM-SQUARE | 2.0 x 500 | 0.1     | -    |
| FOSOP6-2.0      | COPPERBRAZE-0% AG 2.0MM-SQUARE | 2.0 x 500 | 1       | -    |
| FOSOP6-3.0-100G | COPPERBRAZE-0% AG 3.0MM-SQUARE | 3.0 x 500 | 0.1     | -    |
| FOSOP6-3.0      | COPPERBRAZE-0% AG 3.0MM-SQUARE | 3.0 x 500 | 1       | -    |
|                 | <b>2% SILVER</b>               |           |         |      |
| FOSILVER5-2.0   | COPPERBRAZE-5% AG 2.0MM-SQUARE | 2.0 x 500 | 1       | -    |
| FOSILVER5-3.0   | COPPERBRAZE-5% AG 3.0MM-SQUARE | 3.0 x 500 | 1       | -    |
|                 | <b>5% SILVER</b>               |           |         |      |
| FOSILVER2-2.0   | COPPERBRAZE-2% AG 2.0MM-SQUARE | 2.0 x 500 | 1       | -    |
| FOSILVER2-3.0   | COPPERBRAZE-2% AG 3.0MM-SQUARE | 3.0 x 500 | 1       | -    |



## M15

TAURUS M15 Brazing Flux is a white powdered flux with a melting point of 800°C. It is recommended for use when brazing or bronze welding mild steel, copper, brass, cast iron, and galvanised iron. For galvanised work, mix powder with water to form a paste and paint onto both sides of joint to protect heated zinc from both the flame and the atmosphere.

## ALUMINIUM FLUX

TAURUS ALUMINIUM FLUX is a white powdered flux with a melting point of 570°C for use with filler rods containing 5% magnesium (5356), 5% silicon (4043) and 99% aluminium (1050). Remove all traces of the flux after welding to prevent corrosion. This flux may be mixed with water to form a paste.

## SILVER SOLDER

TAURUS SILVER SOLDER FLUX is a general purpose flux used with most silver brazing alloys. The flux has an operational temperature range of 600°C to 800°C.

| PRODUCT CODE | DESCRIPTION                          | WEIGHT | PACKAGE | BULK |
|--------------|--------------------------------------|--------|---------|------|
| FLUX002T-BR  | TAURUS BRAZING FLUX M15 (500G)       | 500g   | 1       | -    |
| FLUX004T-AL  | TAURUS ALUMINIUM BRAZING FLUX (250G) | 250g   | 1       | -    |
| FLUX003T-SS  | TAURUS SILVER SOLDER FLUX (250G)     | 250g   | 1       | -    |

# WELDING CONSUMABLES



38 Jansen Road, Unit 13, Innes Park  
Jet Park, Boksburg, Gauteng, 1459  
011-392-5661  
[order@cut-n-weld.co.za](mailto:order@cut-n-weld.co.za)  
[www.cut-n-weld.co.za](http://www.cut-n-weld.co.za)

## BROCHURES AVAILABLE

SAFETY EQUIPMENT FOR PPE & ONSITE

WELDING EQUIPMENT & ACCESSORIES

GAS EQUIPMENT & ACCESSORIES

PLASMA TORCH & ACCESSORIES

WELDING & PLASMA MACHINES

MIG TORCH & ACCESSORIES

TIG TORCH & ACCESSORIES

WELDING CONSUMABLES