WELDING CONSUMABLES

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E-mail: sales@weldfastuk.co.uk Web: www.weldfastuk.co.uk

MWA International - A division of Weldfast UK Ltd

Company Profile:

MWA international have been manufacturing welding rods in the United Kingdom since 1974. With Mac Electrode distributors around the world, MWA continue to provide welding solutions to every type of industry.

The MWA range of welding rods symbolise high quality and are sold throughout the world. With over 200 products available all applications can be met.

MWA can also offer Private Branded electrodes. A wide range of packaging solutions are available to suit, including unprinted electrodes, AWS printed electrodes and even unique product name printed electrodes can be achieved. Labelling can be as simple or as detailed as you require. We design and print all our labels in house to customers needs.

MWA offer full technical services, with advice from metallurgists and welding engineers, ensuring all problems can be resolved. Our welding electrodes are tested to meet their relevant specification and all batches are checked for the highest weldability standards.

Our qualified metallurgists enable us to formulate all types of electrodes, and using our own, on site, spectrometer we are able to analyse and certify all welding rods. We have recently re-developed our Nickel Alloy range for welding Inconels, Monels, Hastalloys & Nimonics within the nuclear, chemical, and petrochemical industries.

MWA are continuously proving our products amongst a wealth of industry in

- Forging
- Chemical
- Oil
- Foundry
- Steel
- Quarry
- Automotive

ELECTRODES

Mild & Low Carbon Manganese Steels

Mac Fine Steel (AWS E6013)

High quality all-positional mild steel electrode. Easy to use employing touch or conventional welding techniques. Designed for joining light or heavy mild steel sections, highly suitable for use in confined spaces.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-50A	40-60A	55-90A	70-120A	110-160A	140-200A	200-290A

Mac Super Steel (AWS E6013)

Superior all positional mild steel electrode for joining light and heavy gauge steel sections. May be used with conventional or touch welding techniques and are particularly suitable where welding has to be carried out in confined or awkward places Welds are ductile and of a high radiographic quality.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-50A	40-60A	55-100A	90-130A	130-190A	190-240A	220-290A

Mac Super Steel VDH (AWS E6013)

All positional superior electrode for joining light and heavy gauge mild steel. Due to its characteristics, this electrode is suited to applications in confined and awkward spaces involving positional vertical down welding.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
55-100A	90-130A	130-190A

Mac Nil Sil (AWS E6013 Nearest)

Made using a silicon free mild steel core wire and a highly chemically acid type extruded flux coating. Welds with a strong forceful arc leaving minimal slag. The minimum silicon in the metal combined with the overal purity, ensures the weld metal has excellent resisitance to both corrosive & erosion by molten zinc at temperatures of 450-500°C. Thus making it suitable for the welding and repairing of fabricated galvanised containers constructed from high purity iron as defined by BS2858.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-90A	80-140A	100-180A	200-300A

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ELECTRODES

Mild & Low Carbon Manganese Steels

Mac Trode E6716 (AWS E7016)

Manual metal arc welding electrode with a silicon free C: Mn core wire with a concentrically extruded chemically basic flux coating which has been modified to provide good weldability on poor quality AC welding sets.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
60-100A	80-130A	120-170A	140-200A	190-250A

Mac Trode E6718 (AWS E7018-1)

High quality superior all positional low hydrogen Manual Metal Arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition, to provide 120% metal recovery. The electrodes are particularly suitable for welding heavy sections subject to high levels of resistance and for welding problem steels with high sulphur content. Recommended for unalloyed C:Mn ferritic steels with high sub-zero toughness requirements, e.g:- Charpy values down to -60°C. CTOD values at -10°C. Used to best advantage for welding thick sections either on site or in fabrication shops. Excellent all positional weldability.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90A	90-130A	130-180A	160-220A	250-300A

Mac Trode E6724 (AWS E7024)

A range of superior versatile low hydrogen type electrodes to cover a wide range of applications for welding mild and low carbon manganese steels, including those related to the electrode specifications stated; but with exceptional running characteristics (including good striking and re-striking properties). The electrodes have a smooth running arc, leaving little or no residual spatter, and easy slag detachability resulting in clean even beads of excellent radiographic standard.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
90-110A	140-175A	200-230A	230-280A	280-320A

Mac Trode E6728 (AWS E7028)

A range of superior versatile low hydrogen type electrodes to cover a wide range of applications for welding mild and low carbon manganese steels, including those related to the electrode specifications stated; but with exceptional running characteristics (including good striking and re-striking properties). The electrodes have a smooth running arc, leaving little or no residual spatter, and easy slag detachability resulting in clean even beads of excellent radiographic standard.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
90-110A	100-140A	140-190A	170-230A	260-320A

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WELDING CONSUMABLES

ELECTRODES

Carbon Manganese & Low Alloy Steels

Mac Trode E6818-G (AWS E8018-G)

A low hydrogen, basic flux coated, low alloy electrode. Using a silicon free, low nitrogen core wire. Suitable for welding all grades of structural steels with a specified minimum yield strength of 460 N/mm². However, it is of special value when the steel/weld metal also needs guaranteed toughness properties at -50°C.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90A	90-130A	130-180A	160-220A	250-300A

Mac Trode E6818-B2 (AWS E8018-B2)

A superior versitile low hydrogen electrode Ni Cr type, AWS E8018-B2 which uses a silicon free, low nitrogen, high purity C:Mn core wire with a moisture resistant chemically basic flux with a controlled iron powder addition. Recommended for resistance to hydrogen attack up to 330°C and corrosive effects of processing high S crude oil up to 450°C and for prolonged elevated temperature service up to 550°C.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90A	90-130A	130-180A	160-220A	250-300A

Mac Trode E6918-G (AWS E9018-G)

This is a low hydrogen electrode using a free, low nitrogen, high purity C:Mn core wire with a concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition. It is an easy to use electrode for welding in all positions. Good restriking ability and smooth, easy flowing welds. Pre-heat & interpass temperatures 100°C min. and up to 200°C for thick sections.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90A	90-130A	130-180A	160-220A	250-300A

Mac Trode E61018-D2 (AWS E10018-D2)

Basic flux coated low hydrogen, high strength ferritic low alloy electrode giving a metal recovery of 120%. Easy to use, easy striking, which deposits a porosity free weld. Designed for all positional welding of high strength steels.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
60-100A	85-140A	140-190A	200-250A	260-340A

Mac Trode E61018-G (AWS E10018-G)

Low hydrogen manual metal arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with a concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition. For offshore oil well-head process pipework and fittings, these nickel-free electrodes satisfy NACE MR-01-75 requirements intended to ensure resistance to sulphide-induced stress corrosion cracking combined with good sub-zero notch toughness.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90A	90-130A	130-180A	160-220A	250-300A

Mac Trode E61118-G (AWS E11018-G)

Superior low hydrogen electrode, Ni Cr Mo type AWS E11018-G. Smooth arc low spatter easy strike and restrike. When requirements are specified for high strength steels in specific sub zero toughness such as in the North Sea offshore and submarine fabrication work the electrode offers excellent properties. Materials to be welded RQT 701 HY 100 Navy Q2N OS690 cast steel.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
70-90A	90-130A	130-180A	160-220A	250-300A

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ELECTRODES

Nickel Alloys Welding Electrodes

Mac Nicro E200 (AWS E Ni 1)

A superior electrode for joining and overlaying nickel and nickel alloys such as Inco 200 and 201; or nickel and nickel alloys to carbon steels especially where carbon migration is susceptible during high temperature service conditions. For operations such as evaporators, condensers, treatment of certain dry gases and chlorinating plants.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-70A	90-110A	120-140A

Mac Nicro E201 (AWS E Ni Cr Fe 1)

A superior electrode for welding nickel alloys similar to Incoloy 800 and Incoloy DS, and for joining these to stainless and creep resisting Cr Mo steels.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	80-120A	100-150A

Mac Nicro E202 (AWS E Ni Cr Fe 2)

A superior electrode for welding nickel alloys similar to Incoloy 800, Incoloy DS and Brightray to stainless steels and Cr Mo creep steels. For welding 3% to 5% nickel and 9% nickel steels for semi and full cryogenic applications and for welding high temperature cast alloys such as HK40.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-70A	90-110A	120-140A	140-190A

Mac Nicro E203 (AWS E Ni Cr Fe 3)

A versatile electrode for welding almost any nickel chrome alloy for service in both cryogenic and high temperature conditions, with the emphasis on the cryogenic side. For joining and overlaying Inconel 600 and 601 type alloys, Incoloy 800 and 800H, involved in temperatures up to 540° C and for dissimilar applications such as Incoloy 600 and 800H to carbon or stainless steels; Nickel 200 or Monel 400 and Nimonic 75. Also suitable for welding 3%, 5% nickel semi cryogenic steels and 9% nickel steels for full cryogenic conditions. Used intensively in the Nuclear, Chemical and Petrochemical industries.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-90A	80-120A	100-150A	130-200A

Mac Nicro E203B (AWS E Ni Cr Fe 3)

Designed on a highly alloyed core wire with a high purity chemically basic flux to facilitate all positional welding including on site applications, including vertical welding making this electrode ideal for pipework.
A versatile electrode with superior welding characteristics for welding almost any nickel chrome alloy for service in both cryogenic and high temperature conditions, with the emphasis on the cryogenic side. For joining and overlaying Inconel 600 and 601 type alloys, Incoloy 800 and 800H, involved in temperatures up to 540° C and for dissimilar applications such as Incoloy 600 and 800H to carbon or stainless steels; Nickel 200 or Monel 400 and Nimonic 75. Also suitable for welding 3%, 5% nickel semi cryogenic steels and 9% nickel steels for full cryogenic conditions: Used extensively in the nuclear, chemical and petrochemical industries.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-70A	90-110A	120-140A	140-190A

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WELDING CONSUMABLES

ELECTRODES

Nickel Alloys Welding Electrodes

Mac Nicro E207 (AWS E Ni Cu 7)

Manufactured using a high purity nickel based copper alloyed core wire with a chemically basic flux coating, containing extra deoxidants to eliminate from the weld metal gases such as nitrogen. Designed to be used with conventional welding techniques, the strong arc encourages full penetration while the basic slag and deoxidisation system ensures the metallurgical integrity of the deposited weld metal. For welding wrought and cast alloys of similar composition such as: Proprietary alloys include:- Inco, Monel 400, Monel R405.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-80A	70-120A	90-150A	120-190A

Mac Nicro E211 (AWS E Ni Cr Mo 1)

A nickel chrome molybdenum electrode for the welding of alloys similar to Hastalloy B type and for joining and overlaying where severe corrosion is encountered, such as valve seats in the chemical industry.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-70A	90-110A	120-140A

Mac Nicro E212 (AWS E Ni Cr Mo 2)

An electrode designed for welding a range of nickel chrome molybdenum steels and also joining these to ferritic steels and for welding the clad side of steel joints (clad with Ni Cr Mo material).

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-70A	90-110A	120-140A

Mac Nicro E213 (AWS E Ni Cr Mo 3)

A versatile electrode for joining and overlaying a whole range of nickel chrome alloys where cryogenic and high temperature conditions are involved; with the emphasis on the high temperature side. Exhibits excellent strength at temperatures up to 1100° C. Specifically for the welding of inconel 601 and 625, incoloy 800, 801 and 825. Can also be used for welding low alloy ferritic steels such as 3% and 9% nickel steels (for cryogenic applications) super austenitics, and for transitional welds between any of the aforementioned alloys. Can be used in almost any combination where alloys are chosen for their ability to withstand very severe mechanical stress, oxidation corrosion, and extreme operating temperatures.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-70A	90-110A	120-140A	150-210A

Mac Nicro E213B (AWS E Ni Cr Mo 3)

Manufactured on a predominantly alloyed core wire with a unique lime/rutile extruded flux coating designed to impart excellent weldability for this type of complex alloy in all positional welding situations. Designed for welding nickel alloys such as Inconel 601 and Inconel 800 and 801. It is also suitable for super austenitics with high molybdenum levels such as Avesta 904L and 254 S Mo. Also suited for welding 9% nickel steels subject to cryogenic services. May also be used for welds between nickel chrome molybdenum steels.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	70-110A	100-150A

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ELECTRODES

Nickel Alloys Welding Electrodes

Mac Nicro E214 (AWS E Ni Cr Mo 4)

A superior electrode with exceptional welding characteristics for joining and overlaying heat and corrosion resistant wrought and cast nickel chrome alloys such as Hastalloy C276 and Hastalloy C where a low carbon content, coupled with improved alloying elements in the weld metal is required, over and above the specification of Mac Nicro E215.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-70A	90-110A	120-140A

Mac Nicro E215 (AWS E Ni Cr Mo 5)

Highly alloyed versatile nickel based electrode specially formulated to withstand elevated temperatures coupled with resistance to corrosion and thermal shock. Smooth arc, low spatter loss and good slag detachability. The weld metal possesses excellent resistance to corrosion. Work hardens under impact and is fully machinable. For welding Hastalloy C, and due to excellent heat resistance and ability to work harden under impact, the electrodes are recommended for use in the drop forging industry for protection of dies. Widely used in the chemical industry where high resistance to corrosion is required, particularly for applications involving wet chlorine gas and other strongly oxidising media. The electrode also finds wide usage in the fabrication of furnace and heat treatment equipment.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
70-110A	100-130A	130-160A

Mac Nicro E215HR (AWS E Ni Cr Mo 5) Modified

Manual Metal Arc welding electrode manufactured on a pure nickel core wire with a concentrically extruded flux and a chemically semi basic coating, containing both alloying elements and deoxidants. Metal recovery is 160% with respect to its core wire.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
70-110A	110-140A	150-200A	200-250A

Mac Nicro E217 (AWS E Ni Cr Mo 7)

MMA electrode manufactured on a pure nickel core wire with a chemically neutral, alloy bearing, high purity, concentrically extruded flux coating. Metal recovery is 140% with respect to that of the core wire. Designed for welding Ni Cr Mo base materials such as ASTM B574, B575 and UNS N06455 to itself as well and steel and related cladding operations.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-90A	80-110A	130-160A

Mac Nicro E218 (AWS E385-16)

Designed to weld a number of proprietary alloys of the 20Cr, 25Ni, 4.5Mo, Cu types which provide excellent resistance to corrosion by both organic and inorganic acids excluding attack by concentrated nitric acid. Such steels normally used in the form of plate, pipe and tubing include Uddelholm 904L, Sandvik 2RK65, Avesta 254SLX, Uranus B6 and B6M and APV Paralloy 5NLC. This electrode is also suited for welding copper free versions of these steels. Most of these steels are used in the manufacture of plant manufacturing fertilisers and resistance to crevice corrosion and chloride initiated stress corrosion cracking.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-90A	80-110A	130-160A

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WELDING CONSUMABLES

Nickel Alloys Welding Electrodes

Mac Nicro E220Nb (50/50Nb)

Manufactured using a nickel based, chrome alloyed, iron free core wire. The alloy design necessitates the use of a chemically basic flux with a high coating ratio.Suitable for welding materials as below : Inco IN-657, IN-671, IN-560 ASTM A560 Grade 50Cr-50Ni-Cb, Paralloy N50W Duraloy 50/50Cb, DIN 2.4678, 2.4680, 2.4813.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
70-80A	100-150A	180-250A

Mac Nicro E221

High purity nickel chromium core wire, with extruded fully basic flux with low hydrogen levels. Designed for welding nickel, chromium, cobalt, molybdenum based materials that are covered by the UNS N°617 material code. The weld composition ensures optimum strength and resistance to oxidation between 815°C - 1200°C.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	70-110A	100-150A

Mac Nicro E222Mn (25.35.Mn)

Extruded flux coated MMA electrode manufactured on a high alloy core wire. The chemically basic flux, with a moisture resistant coating, gives a sound porosity free deposit with a recovery rate of approximately 120% with respect to the core wire. The electrode is designed to match the composition of Paralloy CR39W and Lloyds Thermalloy T57 and the deposited weld metal will be free from any micro-cracking. This alloy was developed from 800 type alloys with increased chromium and nickel contents and exhibits improved carburisation and oxidation resistance. It is used at temperatures up to 1100° C and is resistant to severe thermal shock and fatigue. Welding applications include centrifugal cast pyrolysis coils, reformer tubes, return bends and tees for the petrochemical industry.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-90A	70-120A	100-150A

Mac Nicro E222Nb (25.35.Nb)

Manual Metal Arc electrode manufactured on a predominantly alloyed core wire with a concentrically extruded chemically basic flux coating. Easy to strike electrode producing porosity free deposit and good slag detachability.
Also suitable for high carbon 18Cr-37Ni-Nb alloys such as DIN 1.4849.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	70-110A	90-150A

Mac Nicro E224Mn (21.33.Mn)

Extruded flux coated MMA electrode manufactured on a high alloy core wire. The chemically basic flux ensures the metallurgical integrity of the fully austenitic weld metal and low residuals of non-metallic impurities. It may be used to weld similarly alloyed base materials such as Inconel 800 and 800H where the higher than normal manganese in the weld will significantly reduce the incidence of solidification cracking on heavily restrained weldments. Proprietary alloys that may be welded include Lloyds T52, Firth Vickers Vicro 8 and Paralloy CR 32 W.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-85A	85-120A	110-165A

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ELECTRODES

WELDING CONSUMABLES

Nickel Alloys Welding Electrodes

Mac Nicro E225Nb (35.45.Nb)

Extruded flux coated MMA electrode manufactured on a nickel, chromium alloyed core wire. The chemically basic, medium alloyed flux coating provides a metal recovery of some 137% with respect to the core wire but still permits positional welding characteristics. The electrode is designed to weld cast alloys such as Paralloy H46M, Lloyds T75 MA, T80 and ET 45. The design emphasis of these materials and the matching electrode is to ensure optimum resistance to carbonisation and oxidation and temperature up to 1150°C typical hardness HV 260/280.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-85A	75-120A	110-160A

Mac Nicro E227 (AWS E320LR-15)

Mac Nicro E227 is designed to weld both cast and wrought alloys such as carpenter 20Cb-3 and similar materials with increased nickel levels, this higher nickel level improves resistance to stress corrosion cracking in chloride environments and reduces corrosion rates in the presence of sulphuric acids. Mac Nicro E227 may also be used to weld leaner nickel alloys of the 20.29.3 Cu Nb classification.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-90A	80-120A	130-170A

Mac Nicro E228 (AWS ENiCrFe2) Modified

Extruded flux coated manual metal arc electrode that produces a precipitation hardening nickel based alloy with controlled levels of chromium, molybdenum, niobium and Iron. Primary usage is for welding of Inco 718 alloys.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-100A	90-120A	110-170A	140-180A

Mac Nicro E23718 (AWS E330-16)

Fully austenitic heat resisting electrode with a rutile coating made on a high alloy core wire designed to weld 18/37 type alloys. Smooth stable arc, low spatter loss, easy releasing slag and smooth porosity free welds. The electrode is designed to match 18/37 type alloy fully austenitic high alloy resisting steels, which will retain a good mechanical strength up to temperatures of 1050°C to 1100°C. Ideal for use in the heat treatment industries and high temperature process plants such as furnace roller – furnace fittings and headers – heat treatment trays and containers – moulds – hearth plates – retorts – radiant tubes.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	70-120A	100-160A

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ELECTRODES

Special Steels

Mac Trode E64W (AWS E309W-16)

High quality austenitic stainless steel rutile coated electrode, depositing 23% chrome, 12% nickel and 2% tungsten weld metal to resist corrosion, heat and friction. Tungsten in the weld metal produces high strength scale and general wear resistance at temperatures up to 1100°C. For joining and overlaying various steels especially heat resistant steels, HR Crown 1 type - primary furnace applications and particularly siutable for repairs to mandrels, used in hot forming of tubular components.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
70-110A	110-140A	140-180A

Mac Trode E65 (AWS E308Mo-16)

Synthetic austenitic stainless steel electrode of 22 Cr, 10 Ni, 3 Mo type, designed mainly for joining hardenable high tensile steels, armour plate and dissimilar steel combinations including stainless to mild steel. Produces sound welds with lower pre-heat temperatures than would normally be expected. Should not be used when extreme conditions, such as elevated or cryogenic temperatures exist.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
80-120A	120-175A	160-210A	200-275A

Mac Trode E66 (AWS E312-17)

Superior specially designed high strength austenitic type electrode of duplex structure. Can be used for overlaying and joining dissimilar steels to one another, high and low carbon steels, spring steels, tool and die steels, cast steels, ferritic to austenitic steels and steels of unknown composition. High resistance to cracking coupled with good wear, heat, impact and corrosion resistance. Therefore this electrode has uses in practically every type of industry resulting in one of the most universally used electrodes for problem and unknown steels.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-35A	30-45A	50-70A	90-110A	120-140A	150-190A	200-250A

Mac Trode E66S (AWS E312-26)

High strength rutile coated synthetic electrode for joining and overlaying dissimilar steels. Economical high recovery electrode produces a 29/9 type stainless steel weld deposit. Positive smooth arc, easy slag removal and builds up rapidly. Can be used in all positions. Ideal for buttering layers or overlaying steels to combat heat, friction and impact, where economy is of the utmost importance. Covers large areas quickly. Will join stainless to carbon steels and steels of unknown quantity.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
80-120A	120-175A	160-210A	200-275A

Mac Trode E66V (AWS E312-16)

Superior high strength austenitic type electrode of duplex structure for joining and overlaying all steels. This variation of Mac Trode E66 is designed specifically to overcome difficult deslagging problems on high manganese tool steels and for inclined vertical down welding and root runs on certain thick sections. Has high resistance to cracking. Wear, heat, impact and corrosion resistant. Used for overlaying and joining dissimilar steels to one another, high and low carbon steels, spring steels, tool and die steels, cast steels, ferritic to austenitic steels and steels of unknown composition.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-35A	30-45A	50-70A	90-110A	120-140A	150-190A	200-250A

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ELECTRODES

Special Steels

Mac Trode E606 (AWS E312-17)

Specially designed high strength austenitic type electrode of duplex structure. All purpose low amperage electrode. Easy to use with smooth arc, low spatter and even bead formulation. Can be used for overlaying and joining dissimilar steels to one another, high and low carbon steels, spring steels, tool and die steels, cast steels, and steels of unknown composition. High resistance to cracking coupled with good wear, heat, impact and corrosion resistance.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-35A	30-45A	50-70A	90-110A	120-140A	150-190A	200-250A

Mac Trode E616 (AWS E312-17)

Superior specially designed high strength austenitic type electrode of duplex structure. All purpose low amperage electrode. Easy to use with smooth arc, low spatter and even bead formation. Can be used for overlaying and joining dissimilar steels to one another, high and low carbon steels, spring steels, tool and die steels, cast steels, ferritic to austenitic steels and steels of unknown composition. High resistance to cracking coupled with good wear, heat, impact and corrosion resistance. Therefore this electrode has uses in practically every type of industry resulting in one of the most universally used electrodes for problem and unknown steels.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-35A	30-45A	50-70A	90-110A	120-140A	150-190A	200-250A

Mac Trode E630 (AWS E307-16)

Tough high strength, fully austenitic electrode, designed to resist heat and impact. Fully machinable. Weld deposit will work harden under impact and retain properties at high temperatures. For joining or overlaying mild and alloy steels, spring steels, heat resisting steels, ideal for the repair of drop forging dies. Suitable for use as a buffer layer prior to hard surfacing of manganese steel, and may be used for welding manganese steel rails or similar applications involving friction, impact or corrosion.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
60-95A	70-120A	110-140A	130-160A	120-200A

Mac Trode E630S (AWS E307-26)

Tough high strength, synthetic austenitic electrode designed to resist heat and impact. Fully machinable with a recovery rate of 170%. Easy to use in all positions producing sound welds, good build-up characteristics and good slag detachability. Weld deposit will work harden under impact and retain properties at high temperatures. For joining and overlaying mild and alloy steels, spring steels and heat resisting steels. Suitable for use as a buffer layer prior to hard surfacing of manganese steel and may be used for welding manganese steel rails or similar applications involving friction, impact or corrosion.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
60-95A	95-120A	120-140A	140-160A	160-200A

Mac Trode E6130 (AWS E Fe Mn-A)

High recovery rutile type electrode for welding, surfacing and building up manganese steel components. Weld deposits have excellent impact resistance and rapid work hardening properties. For applications where a hard surface, resistant to wear under heavy impact and battering is required. For weld reclamation of crushers, railway frogs and crossings and for reclamation of defective manganese steel castings. For welding manganese steels to each other or to mild and low alloy steels.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
80-110A	110-140A	150-180A	180-210A	210-240A

Telephone: 01782 566553 Fax: 01782 566123

WELDING CONSUMABLES

ELECTRODES

Special Steels

Mac Trode E6410 (AWS E410-16)

A specially designed electrode for welding 12% Cr martensitic steels which air harden to produce high strength. (For increased toughness use E6410NM). For joining and the repair of wrought and cast steels subject to corrosion and oxidation. If post weld heat treatment is not possible then an austenitic type stainless steel electrode should be used.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
70-110A	80-140A	100-170A

Mac Trode E6410NM (AWS E410Ni Mo-16)

A specially designed electrode for welding 12% Cr martensitic steels which air harden to produce high strength. For joining and the repair of wrought and cast steels subject to oxidation, but with increased resistance to corrosion, hydro cavitation and improved sub zero toughness.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
70-110A	80-140A	100-170A

Mac Trode E6430 (AWS E430-16)

Manufactured on a pure low carbon core wire with a recovery rate of 130% with respect to the core wire. This electrode has a moisture resistant coating giving very low weld metal hydrogen levels. It has good scaling resistance in air up to 820°C and low corrosion rate in sulphur bearing gases e.g. in H2/H2S mixtures some 5-10 times better than 12% Cr steels at 300-500°C.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
70-110A	80-140A	100-180A

Mac Trode E6410NM HR (AWS E410Ni Mo-26)

High quality superior low hydrogen type electrode for welding high strength martensitic corrosion resistant stainless steel. Has moisture resistant rutile flux coating with a recovery rate of approximately 150%. Easy to strike and restrike, smooth flowing electrode with low spatter and excellent slag detachability. Welds are of a smooth flat appearance. For welding high strength corrosion resistant martensitic stainless and cast steels which have superior sulphide-induced SCC hydro-cavitation properties (when compared with plain 12% Cr steels).

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
70-140A	95-180A	140-250A

Mac Trode E6502 (AWS E8015-B6)

An E502-15 low hydrogen manual metal arc electrode using a silicon free, low nitrogen C Mn core wire with a moisture resistant, chemically basic flux with a controlled iron powder addition. All positional electrode with good slag control. Easy to strike electrode which produces porosity free weld deposits. Exhibits good crack resistance and excellent resistance to oxidisation at temperatures up to 650°C. For assembly welding of creep resistant steels with 5% Cr, 0.5% Mo and closely related grades. Used for pipe welds in the petrochemical industry.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
70-90A	90-130A	130-180A	160-220A

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ELECTRODES

Special Steels

Mac Trode E6505 (AWS E8018-B6)

An E505-15 low hydrogen manual metal arc electrode using a silicon free, low nitrogen C Mn core wire with a moisture resistant chemically basic flux with a controlled iron powder addition. All positional electrode with good slag control. Exhibits good crack resistance. This electrode is designed specifically for welding a range of 9% Cr Mo forged and cast steels, for use in the fabrication and repair of pressure vessels.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
70-90A	90-130A	130-180A	160-220A

Mac Trode E6630 (AWS E630-16)

Low hydrogen manual metal arc electrode using a silicon free, low carbon, high purity, C:Mn core wire with a concentrically extruded, moisture resistant rutile flux, with a recovery rate of approximately 130% with respect to core wire. Easy to strike electrode which produces porosity free weld deposits.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
70-110A	80-140A	100-170A

Mac Trode E61218-G (AWS E12018-G)

Low hydrogen manual metal arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with a concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition. Specially developed for the repair of hot working dies, where a final hardness in the region of 22 – 30 Rc is required.

Sizes available & Recommended Amperage			
3.2mm	4.0mm	5.0mm	6.0mm
110-150A	140-200A	200-260A	250-370A

Mac Trode E61418-G (AWS E14018-G)

Low hydrogen manual metal arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with a concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition. Specially developed for the repair of hot working dies, where a final hardness in the region of 30 – 35 Rc is required.

Sizes available & Recommended Amperage			
3.2mm	4.0mm	5.0mm	6.0mm
110-150A	140-200A	200-260A	250-370A

Mac Trode E61618-G (AWS E16018-G)

Low hydrogen manual metal arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with a concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition. Specially developed for the repair of hot working dies, where a final hardness in the region of 38 – 43 Rc is required.

Sizes available & Recommended Amperage			
3.2mm	4.0mm	5.0mm	6.0mm
110-150A	140-200A	200-260A	250-370A

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WELDING CONSUMABLES

ELECTRODES

Stainless Steels

Mac Stain E100 (AWS E318)

High quality rutile type Niobium stabilised stainless steel electrode for welding 19/12/3 Chrome, Nickel, Molybdenum stainless steels, subject to heat and to resist certain acids and corrosive liquids. Suitable for applications where good resistance to general corrosion and pitting is required. Due to niobium stabilisation the weld deposit has good resistance to intergranular corrosion, and is suitable for applications involving high temperatures up to 600° C. Extensive applications are found in chemical and drug processing plants, food, petroleum, and allied industries.

Sizes available & Recommended Amperage					
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm
25-35A	30-45A	45-70A	70-110A	110-140A	140-180A

Mac Stain E100 ELC (AWS E316L)

High quality rutile low carbon stainless steel electrode depositing weld metal of the 19% Chromium, 12% Nickel, 3% Molybdenum type for corrosion resistance. Wide usage in textile, pulp and paper, rayon and chemical industries. May be used for overlaying carbon and low alloy steels to provide corrosion and acid resistance. Suitable for general service at temperatures up to 500° C and for acid resistance up to 350° C. The electrode is suitable for welding steels of AISI 316L, 316 and 317 types.

Sizes available & Recommended Amperage					
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm
25-35A	30-45A	45-70A	70-110A	110-140A	140-180A

Mac Stain E100H (AWS E316H-15)

Manufactured on an austenitic core wire with a fully chemically extruded basic flux. The electrode is suitable for all positional welding and great resistance to porosity. E100H is intended for welding 316 stainless steels used for elevated strength and oxidation resistance for typical applications arising in the power generator industry. Such steels and electrodes have a controlled carbon content of 0.04 - 0.08%.

Sizes available & Recommended Amperage					
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm
25-35A	30-45A	45-70A	70-110A	110-140A	140-180A

Mac Stain E101 (AWS E347)

High High quality rutile type, Niobium stabilised stainless steel electrode for welding and overlaying 19% Cr, 9% Ni austenitic stainless steels subject to temperatures up to 600° C. Ideal for use on pressure vessels, food and process plant, domestic stainless steel equipment etc. Steels for which the electrode is recommended are as follows:
AISI Type 321 (EN58 B and C) Titanium stabilised
AISI Type 347 (EN58 F and G) Niobium stabilised
AISI Type 302 (EN58 A) unstabilised
AISI Type 304 (EN58 E) unstabilised

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-35A	30-45A	45-70A	70-110A	110-140A	140-180A	140-180A

Mac Stain E101 ELC (AWS E308L-17)

High quality rutile type stainless steel electrode for welding low carbon 19% Chromium, 9% Nickel stainless steel. The extra low carbon content provides improved corrosion resistance and notch toughness at low temperatures. Wide usage in the pressure vessel, process plant, dairy and food industries, also suitable for cryogenic applications where high notch toughness at sub-zero temperatures is required. Although the electrode is primarily for welding steels of the AISI 304L and 308L types, it may also be used for welding the higher carbon types 304 and 308. In applications where the operating temperature does not exceed 400° C the electrode may also be used for welding type 347 steels.

Sizes available & Recommended Amperage					
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm
25-35A	30-45A	45-70A	70-110A	110-140A	140-180A

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ELECTRODES

Stainless Steels

Mac Stain E101CF (AWS E308H-16)

Manufactured on a matching alloyed core wire with a high rutile based flux coating. The electrode has a stable but soft arc and fluid slag ensures short arc welding characteristics used for all positional pipework welding which ensures weld metal intergrity and smooth weld beads. The electrode is designed for welding controlled carbon 18% Cr 10% Ni stainless steels, particularly pipework operating between 400-815°C, such applications arise in the petrochemical industries.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-90A	70-120A	100-160A	130-210A

Mac Stain E101H (AWS E347-16)

A rutile flux coated 347 stainless steel all positional electrode with a controlled carbon content of 0.04- 0.08 and controlled ferrite level of 3-7%. Manufactured on a low carbon 308L stainless core wire. Designed for welding 347 & 321H stainless steels subjected to elevated service temperatures, such applications occur mainly in the power generating industry.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-90A	70-120A	100-160A	130-210A

Mac Stain E102 (AWS E310)

Fully austenitic stainless steel electrode with a rutile coating designed to weld 25/20 Chromium Nickel heat resisting steels. Specifically designed for welding austenitic stainless heat resistant steels such as AISI Type 310 and Firth Vickers Immaculate 5. The weld deposit provides good heat resistance up to 1400° C in air, and up to approximately 650° C in oxidising sulphurous atmospheres. The electrodes are also suitable for welding stainless to carbon or low alloy steels. Recommended for welding foundry heat treatment trays and bins, foundry thermo couple units and many furnace elements.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-60A	70-100A	110-140A

Mac Stain E103L (AWS E309L-17)

General purpose stainless steel electrode of 23/12 type designed for joining dissimilar stainless steels, of the most common types, to one another. Primarily designed for fabrication applications where tolerance to dilution is exploited in joining 410, 304, 321, 316 to mild and low alloy steels for brackets, stiffeners etc. Also employed as a buffer layer on mild steels and used on clad plate applications extensively. Similar cast and wrought steels can also be welded if the service conditions are below 400°C.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
40-60A	40-60A	50-60A	70-100A	110-140A	140-180A	180-220A

Mac Stain E103CF (AWS E309-16)

High quality rutile type stainless steel electrode for welding steels of a similar composition. The deposited weld metal has a controlled carbon content of about 0.08% and a low ferrite level, therefore increasing the high temperature strength and stability of the welds microstructure in service conditions above 400oC. Normally used in furnace and flue gas systems.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-80A	70-120A	100-160A	130-200A

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WELDING CONSUMABLES

ELECTRODES

Stainless Steels

Mac Stain E103Mo (AWS E309L Mo)

General purpose stainless steel electrode of 23/12/3L type designed for joining dissimilar stainless steels, of the most common types, to one another. Primarily designed for maintenance applications where various types of stainless steels intermediate in composition between 18/8 and 23/12 Chrome Nickel, are used and where the need for one electrode, to accommodate all applications on a general basis, is required. Most of the common types of stainless steel can be welded with this electrode, without the loss of properties.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-60A	70-100A	110-140A

Mac Stain E105 (AWS E317)

Manufactured using a high purity ferritc core wire with a alloyed flux whose slag and deoxidation system ensures full alloying with no trace segregation of any one element. Ideal electrode for contact welding and mitred fillets joints and deposits smooth even weld appearance for extra efficiency and deposits a weld metal recovery rate of 180%. The electrode is designed to weld ASTM 317 and similar austenitic alloys in which the high Mo content provides extra resistance to pitting in high chloride environments. This electrode may be used in cast or wrought form eg. BS 317S16 – 317S12 – 317C16 – 317C12 – ASTM 317 and CG 8M. May also be used for mixed welds between 317 – 316 – 304 – 321 – 347 etc.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
140-180A	200-230A	230-280A

Mac Stain E120 (25.6.2 L.R)

Designed on a highly alloyed core wire with a high purity lime/rutile flux coating that deposits high chromium duplex weld metal with excellent resistance to corrosion and erosion. After water quenching from 1100°C the microstructure is 30 to 40 % delta ferrite – balance austenite. Mac Stain E120 is designed to weld alloys in cast condition which are then solution heat treated at 1100°C and then air or water quenched. These alloys include AISI 329, DIN 1.4460 and 1.4582 and propriety alloys such as Firth Vickers FMN, Weir Materials Xeron 25, Sandvik 10RE51 and 3RE60.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
45-70A	70-110A	110-140A	140-180A

Mac Stain E120Cu (25.6.2. Cu.L.R)

Designed on a highly alloyed core wire with a high purity lime/rutile flux coating that deposits high chromium duplex weld metal with excellent resistance to corrosion and erosion.
Mac Stain E120Cu is designed to weld alloys in cast condition such as ASTM A351, A744, CD4MCu, UNS J93370, ASTM A240, BS3146 ANE 21.Propriety alloys include Uranus 55 and Ferralium. After welding the weldment is water or air quenched from 1100°C and this solution heat treatment ensures both weld and casting have similar microstructures
e.g. austenite with 30% to 40% delta ferrite.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
45-70A	70-110A	110-140A	140-180A

Mac Stain E122 (25.9.3.L.R)

Designed on a highly alloyed core wire with a high purity lime/rutile flux coating that deposits high chromium duplex weld metal with excellent resistance to corrosion and erosion. The microstructure of the as deposited weld contains 30% to 50% delta ferrite – balance austenite. This electrode has a very stable arc, low spatter, easy strike and restrike, good slag detachability and porosity free smooth welds. Mac Stain E122 is designed to weld the following alloys when no subsequent solution heat treatment is applied to the weldment. ASTM A182 Grade F51, UNS S31803, DIN 1.4462, BSC Hyresist 22/5, Sandvik SAF 2205, Avesta 2205, Valourec VS22.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
45-70A	70-110A	110-140A	140-180A

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ELECTRODES

Stainless Steels

Mac Stain E124 (26.9.3. Cu.WR) Zeron 100 Alloy

Designed on a highly alloyed core wire with a high purity lime/rutile flux coating that deposits high chromium duplex weld metal with excellent resistance to corrosion and erosion. The microstructure of the as deposited weld contains 30% to 50% delta ferrite – balance austenite. This electrode has a very stable arc, low spatter, easy strike and restrike, good slag detachability and porosity free smooth welds.
E124 is designed to weld the following alloys when no subsequent solution heat treatment is applied to the weldment. UNS S32760 (wrought) and UNS J99380 (cast) and Weir Materials Zeron 100 (proprietary brand).

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
45-70A	70-110A	110-140A	140-180A

Mac Stain E122B (25.9.3.L.B)

Designed on a highly alloyed core wire with a high purity chemically basic flux to facilitate all positional welding including on site welding. The microstructure of the as deposited weld contains 30% to 50% delta ferrite – balance austenite which provides excellent resistance to corrosion and erosion. This electrode has a very stable arc, low spatter, easy strike and restrike, good slag detachability and porosity free smooth welds.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
45-70A	70-110A	110-140A	140-180A

Mac Stain E101Mo (AWS E308Mo-17 nearest)

High quality lime rutile low silica stainless steel welding electrode for welding 19% Cr, 9% Ni & 3% Mo Stainless steels. The electrode has good strike and restrike characteristics and is suitable in all positions. Designed for welding hardenable high strength ferritics such as armour plate.

Sizes available & Recommended Amperage						
1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
25-35A	30-45A	45-70A	70-110A	110-140A	140-180A	180-220A

Mac Stain E102EHC (AWS E310H-15)

For the welding of 310 stainless steels. The electrode is an all positional. It has enchanced carbon content making the electrode suitable for welding HR6, T42, HK40 etc.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-95A	75-125A	100-160A	135-215A

Mac Stain E107

An extruded flux coated manual metal arc electrode manufactured on an alloyed core wire giving a nominal 22Cr, 10Ni deposit micro alloyed with rare earth minerals. Special rutile- alumina-silicate fluxes formulation that ensures ease of welding such as Avesta 253, with easy arc strike and re-striking and smooth weld seams and readily detachable slag. Designed for applcations and alloys that need good reistance to oxidation up to 1100°C e.g. furnice parts - flues - exhaust combustion nozzles.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
140-180A	200-230A	230-280A

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WELDING CONSUMABLES

ELECTRODES

Aluminium

Mac Alum E95 (AWS E4043)

Aluminium 4/5% silicon type electrode suitable for the welding of commercially pure aluminium and similar alloys except those which contain magnesium or zinc as main alloying elements. Rapid deposition rate, good penetration, excellent weldability and slag control. The special chemically active mineral coating enables easy removal of surface oxides during welding, ensuring results of high quality. Welding commercially pure aluminium where a slightly higher tensile is required and for higher strength alloys of similar composition. Suitable for welding the wrought alloys H9, H20 and H30. The electrodes are unsuitable for welding alloys with high magnesium such as the 5% Mg type.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-90A	80-110A	110-150A	150-180A

Mac Alum E97 (AWS E4047)

Aluminium 10/12% silicon type electrode for welding wrought and cast aluminium alloys of similar composition. Rapid deposition rate, good penetration characteristics, excellent stability, weldability and slag control. The special chemically active mineral coating enables easy removal of surface oxides during welding ensuring results of high quality. Suitable for slag over slag welding. Welding wrought alloys N4, H9, H10, H20, H30 and cast alloys LM6, LM8, LM9, LM13 and LM20. Used extensively for repair of casting defects such as surface voids where slag over slag techniques may be employed.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-90A	80-110A	110-150A	150-180A

Hard Facing

Mac Hard E301 (37-40 RC)

Designed for applications where high resistance to impact is the main requirement. The electrode is all positional and has a metal recovery rate of 120%. Welds can be softened by heat treatment at 720-750°C, machined and subsequently re-hardened by oil or water quenching. Used for the hard facing of crusher jaws, dredger tumbler plates, punches, shears, guillotine blades, tractor idler wheels, roller and track links. Also suitable for depositing buffer layers and for building up multi-layer deposits on badly worn components.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
80-100A	90-110A	110-170A	160-220A	260-300A

Mac Hard E304 (57-59 RC)

Designed to deposit wear resistant overlays on all ferrous metals where high resistance to impact and abrasion is required. The electrode is all positional with a metal recovery rate of 110%. The welds are non-machinable in the as welded state but can be softened by heat treatment at 720 - 750°C. After machining the welds can be rehardened by oil or water quenching. Applications include earth moving equipment, scraper blades, bucket lips and facings, farm implements and any application subject to impact and abrasion.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
80-100A	90-110A	110-170A	160-220A	260-300A

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ELECTRODES

Hard Facing

Mac Hard E306 (62-65 RC)

Hard facing electrode designed for applications on ferrous metals involving friction and severe abrasion, also where certain heat and corrosive conditions apply. The electrode is of the rutile chromium carbide all positional type and has a metal recovery rate of 150%. Ideal for foundry sand mill blades, impellor worms, screws, etc., also bucket edges and digger teeth in conjunction with Mac Trode E630 being used as a buttering layer.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
90-130A	130-170A	170-220A

Mac Hard E307 (60-62 HRC)

High chromium hard facing electrode made on a mild steel core wire. The chemically basic flux also contains other significant carbide formers than chromium e.g. tungsten, niobium, molybdenum and vanadium. This ensures a microstructure of complex carbides capable of withstanding severe abrasion and also resistance to oxidation and stress at elevated temperatures. Typical applications occur in the earth moving and cement industries also in the iron and steel industries on furnace parts- fire gate bars etc.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
110-150A	140-200A	190-250A

Mac Hard E308 (60-66 RC)

Hard facing electrode designed specifically for applications on ferrous metals where rapid deposition is required – especially where dot formation is required with little or no deslagging involved. The electrode is designed to produce spatter type deposition in the vertical welding position but will also give conventional bead deposit in the downhand welding position. Designed purposefully for the sugar cane industry for hard facing sugar cane crushing rolls welding in the vertical position whilst the rolls are being slowly revolved. The deposit is in the form of a spray spatter and results in even dot formation of a highly abrasive resistant coating. Ideal also for many wear applications in quarrying and earth moving where severe abrasion is encountered.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
100-130A	130-170A	170-250A

Mac Hard E335T (55-60 RC Tubular)

Superior highly alloyed all positional tubular flux coated electrode for hard facing where extreme abrasion is involved. Alloy content 40% minimum. Moisture resistant. Smooth easy to use electrode with high deposition rate at low amps (employing higher amps than necessary will result in greater burn off and dilution of the alloy content, and poorer wear life). Low slag formation allows multi-layer welding without need to de-slag between runs – 4kg/hr. Surface cracking in certain instances may occur, but in practice will assist in the wear performance. The surface cracking has no detriment whatsoever. The highly abrasive resistant deposits find numerous applications on quarrying and mining machinery and equipment, in brickworks and extensive applications on crushing equipment and on earth moving and agricultural machinery.

Sizes available & Recommended Amperage		
6.0mm	8.0mm	11.0mm
80-130A	140-190A	190-260A

Mac Tungsten E375 (75 RC Tubular)

A tubular flux coated electrode designed to give maximum abrasion resistance, depositing tungsten carbide particles held in a tough steel matrix. Operates at low amperage with little spatter and produces smooth porosity free welds. By using a weaving technique, large areas of smooth weld overlay can be achieved. Recommended current range should not be exceeded otherwise the wear resisting properties will be destroyed. The welds are non-machinable. Recommended where severe abrasion coupled with low impact occurs. Ideal for foundry sand mill blades and slingers, pan scrapers, rock drills, pug mill knives, cement blades, conveyor screws, dredger teeth, gravel pumps and numerous other similar applications.

Sizes available & Recommended Amperage
6.0mm
90-145A

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WELDING CONSUMABLES

ELECTRODES

Tools and Dies

Mac Tool E3042

Manufactured on a high purity ferritic core wire with an alloy bearing concentrically extruded basic flux. It is used for both the maintenance and manufacture of components and tools subjected to impact and abrasion at temperatures up to 550ºC. Such applications include dies, hot & cold shear blades, hammers, sewage and guillotine blades.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-70A	80-110A	140-170A	170-210A

Mac Tool E3043 (Hot working tool steel)

Low hydrogen manual metal arc welding electrode using a silicon free, low nitrogen, high purity C:Mn core wire with a concentrically extruded, moisture resistant chemically basic flux with a controlled iron powder addition. Specially developed for wear resistant surfacing of hot working steels exposed to abrasion, impact and compression. The electrode has excellent running characteristics, with easy striking and good slag detachability Preheat workpiece to 400ºC. Finish by Grinding

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
80-110A	100-140A	130-170A

Mac Tool E3044 (Hot working tool steel)

Manufactured on a high purity ferritic core wire with an alloy bearing chemically basic concentrically extruded flux. All positional welding characteristics with excellent control of the molten welding pool. Used to special advantage for the repair of hot working dies by single or multi layer build ups, or surfacing rollers or hot shear blades. When machining tungsten carbide tools are used to obtain the best profile. Excellent resistance to impact and abrasion up to 550ºC and this is combined with the ability of the deposit to be machined make it an exceptionally versatile alloy. Pre-Heat 200 -300ºC. Slow cool after welding. Readily machinable with carbide tools.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-70A	80-110A	140-170A	170-210A

Mac Tool E3053 (H11 Type)

Manufactured on a high purity mild steel core wire with a concentrically extruded chemically basic flux that contains the alloying elements and deoxidants. The metal recovery rate is some 130% with respect to the core wire, the electrode is suited for all positional work and the slag is easy controlled and resists control when building up edges. Mac Tool E3053 is essentially a modified high speed steel alloy to enlarge it's range of welding applications on cutting tools, reamers and similar no PWHT is needed and hot hardness up to 600°C is excellent. When toughness as well as hot hardness is needed or when machining is required the alloy should be annealed and slow cooled, followed by H.T at 1200°C followed by air cooling or quenching.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
70-90A	90-140A	130-190A	160-220A

Mac Tool E3060 (10% Cr Alloy)

Manufactured using a high purity, low silicon wire with a chemically basic alloy bearing flux. May be used in positions except vertically down, strong stable arc, fillet welds are convex, weld metal of bright appearance. Very low levels of hydrogen. Used to best advantage for downhand welding for critical repairs to die blocks when the weld metal must combine good toughness, high strength and resistance to oxidation at high temperatures, plus resistance to thermal shock.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
70-90A	90-140A	130-190A	160-220A

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ELECTRODES

Tools and Dies

Mac Tool E3062 (High Speed Steel)

Hard facing electrode, designed to deposit high quality high speed steel on mild or low alloy steels, having a metal recovery rate of 115%. Tough and highly crack resistant deposits, retaining hardness at temperatures up to 620°C. Deposits can be annealed and re-hardened by oil quenching. Highly recommended for the fabrication of blanking and piercing dies, knife blade edges, shear blades, lathe tools, boring tools, milling cutters, broaching tools, drills, hot working dies etc., ideal for the building up of edges on small components. Weld metal hardness 60 HRC.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-80A	90-120A	130-150A	150-220A

Mac Tool E3063 (AWS E502-15)

Low hydrogen manual metal arc electrode with a controlled iron powder addition. All positional electrode with good slag control. Exhibits good crack resistance and excellent resistance to oxidisation at temperatures up to 650° C. For welding of creep resistant steels with 5% Chrome, 0.5% Moly and closely related grades. Used for pipe welds in the petrochemical industry.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
70-90A	90-130A	130-160A	160-220A

Mac Tool E3064 (DIN 8555)

A low hydrogen, iron powder basic flux coated electrode. Designed for special hardfacing applications involving heavy impact loading combined with abrasion. This electrode is ideally suited for forging dies because of its very tough deposit. It is an H13 type product.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
80-140A	100-180A	140-240A

Mac Tool E3065 (DIN 8555)

A low hydrogen, iron powder basic flux coated electrode for hard facing applications involving a combination of both impact and abrasion. Easy to use, giving sound porosity free welds. Ideally suited for use in the forging industry.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
90-150A	110-190A	150-250A

Mac Tool E3067

Extruded flux coated MMA electrode manufactured on a high purity nickel core wire with a complex alloyed chemically neutral flux coating. Metal recovery is some 150% with respect to the core wire. The alloy may be described as a nickel based Cr CO Mo Al and Ti alloyed material that exhibits excellent hardening characteristics. E3067 deposits weld metal with excellent high temperature strengh and toughness stability while retaining excellent resistance to oxidation and creep. The alloy is exceptionally valuable on hot working tools, in the drop forging industry, notably the repair of GFM hammers. As with all complex nickel based alloys,welding procedures and post weld cooling rates within the 200°C min and 400°C max interpass temperatures, should be adhered to. The weld procedure is designed to favour a maximum fineness of dendritic structure to reduce micro fissuring and liquation cracking. The use of minimum amperages consistent with good weldability is one criteria that greatly assists this objective.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-80A	80-110A	140-180A	160-220A

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WELDING CONSUMABLES

ELECTRODES

Tools and Dies

Mac Tool E3069

Extruded flux coated MMA electrode manufactured on a high purity nickel core wire with a complex alloyed chemically neutral flux coating. Metal recovery is some 150% with respect to the core wire. Deposited weld metal is similar to WASP alloy tool steel, will work harden to 45 HRC.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-80A	80-110A	140-180A	160-220A

Mac HICA E3071 (AWS E Co Cr-C)

Grade 1 stellite type high recovery cobalt based electrode designed to combat all four elements of wear, i.e. heat, impact, corrosion and abrasion. Most suitable of cobalt range where abrasion is the most predominant of the four elements of wear. Excellent for rebuilding corners with minimum base metal dilution. Has ability to overlay extensive areas without cracking. Will retain hardness at high temperatures. Welds are non-machinable. Recommended for use in the iron and steel industries or any industry where heat, corrosion and abrasion occur concurrently. Metal weld hardness 55 HRC.

Sizes available & Recommended Amperage			
3.2mm	4.0mm	5.0mm	6.4mm
90-115A	100-150A	170-220A	220-275A

Mac HICA E3072 (AWS E Co Cr-A)

Grade 6 stellite type high recovery cobalt based electrode designed to combat all four elements of wear, i.e. heat, impact, corrosion and abrasion. Most suitable of cobalt range where impact is the most predominant of the four elements of wear. Excellent for rebuilding corners with minimum base metal dilution. Has ability to overlay extensive areas without cracking. Will retain hardness at high temperatures. The welds are machinable. Recommended for use in iron and steel industries. Suitable for use on shear blades, dies, punches and all applications where good resistance to heat, impact, corrosion and abrasion is required. Metal weld hardness 45 HRC.

Sizes available & Recommended Amperage				
2.5mm	3.2mm	4.0mm	5.0mm	6.4mm
60-75A	90-115A	100-150A	170-220A	220-275A

Mac HICA E3073 (AWS Co Cr-B)

Grade 12 stellite type high recovery cobalt based electrode designed to combat all four elements of wear, i.e. heat, impact, corrosion and abrasion. The electrode provides optimum impact and abrasion resistant properties while retaining hardness at elevated temperatures. Excellent for rebuilding corners with minimum base metal dilution. Has ability to overlay extensive areas without cracking. Welds are non-machinable. Metal weld hardness 52 HRC.

Sizes available & Recommended Amperage		
3.2mm	4.0mm	5.0mm
90-115A	100-150A	170-220A

Mac HICA E3074 (Cobalt Special)

High recovery chrome / cobalt / iron based electrode designed to combat all four elements of wear, i.e. heat, impact, corrosion and abrasion, but with emphasis on impact properties. The addition of molybdenum refines the grain structure and produces good hot hardness. Excellent for rebuilding corners with minimum base metal dilution. Has ability to overlay extensive areas without cracking. Will retain hardness at high temperatures. The welds are machinable and will work harden under impact. Designed initially as a forging material for either repairs or sinking. Recommended for use in the iron and steel industries. Suitable for use on shear blades and dies. Due its excellent impact properties and refined grain structure this electrode is ideally suited to clipping tools and forging punches. Weld metal deposit 25 HRC and will work harden to 50 HRC

Sizes available & Recommended Amperage				
2.5mm	3.6mm	4.0mm	5.0mm	6.4mm
70-90A	90-115A	110-150A	140-190A	220-275A

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ELECTRODES

Tools and Dies

Mac HICA E3075 (AWS E Co Cr-E)

This electrode is also known as alloy 21. The flux is a rutile type made on a fully alloyed core wire. Cobalt based electrode designed on a fully alloyed core wire to combat all four elements of wear, i.e. heat, impact, corrosion and abrasion. Most suitable of cobalt range where toughness is the most predominant of the four elements of wear. Excellent for rebuilding corners with minimum base metal dilution. Has ability to overlay extensive areas without cracking. Designed specifically for use as a forging die material. Because of it's low carbon content, the electrode has excellent resistance to thermal and mechanical shock. The electrode deposits a high alloyed cobalt base weld metal with 0.3% carbon. Welds are machinable. The suggested usage's are in iron and steel industries or any industry where heat, corrosion and abrasion occur concurrently, for such items as steel mill rolls, valves seat inlays, hot working dies and tools, hot shearing blades, tongs etc.
Deposited weld metal 30 HRC and will work harden to 45 HRC.

Sizes available & Recommended Amperage			
3.6mm	4.0mm	5.0mm	6.4mm
90-115A	110-150A	140-190A	220-275A

Cutting, Gouging & Stud Extractor

Mac Groove E71 (Cutting Gouging)

An electrode specially designed for cutting, gouging and piercing operations on all metals without the use of air or oxygen. Metal surfaces are seared by the force of the arc leaving them clean and ready for subsequent welding operations. Smooth and even grooves are easily produced. Applications include hardenable steels, armour plate, hard weld overlays, cast iron and stainless steels. The electrodes are ideal for back gouging of butt welded seams and almost indispensable for the preparation of cast irons prior to welding repair.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
100-150A	150-150A	250-300A	300-450A

Mac Stud E73 (Stud Extractor)

Extruded flux coated MMA electrode made on high alloy Duplex microstructured high tensile non-heat treatable (Hence non-softening alloyed core wire). The electrode has the ability to maintain a continuos arc when slag over slag welding while restricting the flow of the molten metal. These physical welding characteristics make the electrode ideal for the removal of threaded bolt when the bolt head has sheared at or just below the surface.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-90A	75-130A	120-180A	160-220A

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WELDING CONSUMABLES

ELECTRODES

Cast Iron Welding Rods & Electrodes

Mac Cast E405 (AWS E Ni Ci)

Superior high quality fully machinable nickel electrode for joining and building up on cast irons. Builds up quickly and produces sound fully machinable deposits. Minimum base metal dilution. No undercut. For hot and cold welding of cast irons and for joining or building up on malleable iron, steels and copper or one to another. Ideal for foundry reclamation.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
30-75A	70-100A	100-150A	120-180A

Mac Cast E406 (AWS E Ni Ci)

High quality general purpose nickel electrode designed for economical joining and surfacing of cast iron. Positive arc, fast build-up, easy slag detachability and fully machinable porosity free welds. May be used for hot or cold welding of cast irons and for surfacing and building up on malleable irons. It is suitable for joining mild steel to cast iron and is ideal for maintenance repair where sound welds are required.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-80A	80-100A	120-170A	170-200A

Mac Cast E407 (AWS E Ni Fe Ci)

High strength machinable nickel iron electrode for joining mild steel to cast iron and cast iron to cast iron also for building up on cast irons. Low amperage, smooth arc, minimum spatter and high resistance to cracking. Due to bi-metallic core wire this product gives excellent current carrying capacity which will prevent overheating. For the repair of grey, S.G., nodular or ductile irons where higher strength is required.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
40-70A	70-110A	110-150A	130-170A

Mac Cast E409 (AWS E Ni Ci)

A special non conductive coating, fully machinable, nickel based electrode for welding most cast irons. Specially designed for use where awkward and confined spaces cause arcing difficulties. May be used for hot or cold welding of most types of cast iron.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
50-80A	90-110A	110-140A	140-180A

Mac Cast E410 (Special)

Non-machinable electrode for cast iron repairs. Can be used on dirty and contaminated castings or any cast iron repair where machinability is unimportant. For best results castings should be preheated (maintained during welding) and slow cooled, to prevent possibility of cracking. Excellent colour match, will rust.

Sizes available & Recommended Amperage			
2.5mm	3.2mm	4.0mm	5.0mm
60-80A	90-110A	110-140A	140-180A

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ELECTRODES

Bronze

Mac Bronze E808 (AWS E Cu Sn-C)

A versatile rutile coated electrode which deposits a tough overlay of fully deoxidised bronze. Designed for joining and overlaying steels, cast irons, malleable iron, bronzes, brass and copper based metals. Due to the high thermal conductivity of copper alloys, pre-heating is advisable particularly if heavy sections are involved. The electrode is recommended for overlaying and building up bearing surfaces, bushes, impellor blades, valve seats, etc.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	80-130A	130-180A

Mac Bronze E809 (AWS E Cu Sn)

A superior rutile coated tough 14% tin bronze electrode for joining and overlaying steels, cast irons, malleable irons, bronzes and copper based metals. Due to the high thermal conductivity of copper and copper alloys pre-heating is advisable in certain instances particularly where heavy sections are involved. Highly recommended for bearing surfaces and for wear facing against sea water corrosion.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
50-75A	80-130A	120-175A

Mac Bronze E810 (AWS E Cu Al-A2)

An electrode designed for joining and overlaying aluminium bronze and for corrosion and wear resistant deposits on steel and cast irons. The weld metal deposits will produce good friction and corrosion resistance. Ideal for bearing surfaces, shafts, guides, slides, gear teeth and any wear application involving metal to metal friction.

Sizes available & Recommended Amperage		
2.5mm	3.2mm	4.0mm
60-80A	80-130A	130-180A

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WELDING CONSUMABLES

NIKKO STEEL ELECTRODES

Mild Steel Electrodes

This group of electrodes is designed for general fabricational welding of wrought sections of C-Mn steel up to 15mm in thickness. The wrought steels may be in the form of sheet, plate, pipe, rolled, drawn or extruded products.

Applications include: plate for ship hull construction, site and workshop welding of pipes and pipeline, construction of pedestrian walkways and bridges, vehicle and boiler construction as well as a great variety of general construction and workshop applications.

The mechanical properties given in the individual data sheets are representative of all weld metal deposits welded in the flat position to the appropriate national standard. However, it should be noted that mechanical properties of the weld metal can vary with heat input and post-weld cooling rates and can thus be affected by welding procedure, welding position and material thickness.

C-10 - VAC PACK

AWS A5.1 E6010

Approvals: LR, CE

DC+ ONLY

Part No.	Size	Amp	Weight
WER0150	2.5mm x 350mm	70 - 90	2 Kg
WER0151	3.2mm x 350mm	80 - 120	2 Kg
WER0152	4.0mm x 400mm	120 - 150	2 Kg

C-11 - VAC PACK

AWS A5.1 E6011

Approvals: LR, ABS, CE

Part No.	Size	Amp	Weight
WER0160	2.5mm x 350mm	70 - 90	2 Kg
WER0161	3.2mm x 350mm	90 - 130	2 Kg
WER0162	4.0mm x 400mm	130 - 180	2 Kg

RD260

AWS A5.1 E6013

Approvals: LR, ABS, BKI, CE

Part No.	Size	Amp	Weight
WER0125	1.6mm x 250mm	20 - 40	1 Kg
WER0126	2.0mm x 300mm	30 - 80	1 Kg
WER0127	2.5mm x 350mm	60 - 110	1 Kg
WER0128	3.2mm x 350mm	80 - 140	1 Kg
WER0129	4.0mm x 450mm	120 - 190	1 Kg
WER0001	1.6mm x 250mm	20 - 40	2 Kg
WER0002	2.0mm x 300mm	30 - 80	2 Kg
WER0003	2.5mm x 350mm	60 - 110	5 Kg
WER0004	3.2mm x 350mm	80 - 140	5 Kg
WER0007	3.2mm x 450mm	80 - 140	5 Kg
WER0005	4.0mm x 450mm	120 - 190	5 Kg
WER0006	5.0mm x 450mm	160 - 230	5 Kg

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NIKKO STEEL ELECTRODES

Mild Steel Electrodes

RD460

AWS A5.1 E6013

Approvals: LR, ABS, NK, BKI,CE

Part No.	Size	Amp	Weight
WER0013	2.5mm x 350mm	60 - 110	5 Kg
WER0014	3.2mm x 350mm	80 - 140	5 Kg
WER0015	4.0mm x 450mm	120 - 190	5 Kg
WER0016	5.0mm x 450mm	160 - 230	5 Kg

MSE

AWS A5.1 E6013

Approvals: CE

Part No.	Size	Amp	Weight
WER0010	3.2mm x 350mm	100 - 140	5 Kg
WER0011	4.0mm x 450mm	150 - 190	5 Kg
WER0012	5.0mm x 450mm	180 - 230	5 Kg

GA-24

AWS A5.1 E7024

Rutile - Iron Powder (180% Recovery)

Approvals: BKI,CE

Part No.	Size	Amp	Weight
WER0040	3.2mm x 350mm	130 - 180	5 Kg
WER0041	4.0mm x 450mm	170 - 240	5 Kg
WER0042	5.0mm x 450mm	210 - 310	5 Kg

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WELDING CONSUMABLES

NIKKO STEEL BUILT ON QUALITY & TECHNOLOGY

NIKKO STEEL ELECTRODES

High Tensile Steel Electrodes

This group of electrodes is suited for welding all thicknesses of steel, either wrought or cast, and even high carbon variants, provided the appropriate pre-heat and post-weld heat treatment is applied.
A moisture free chemically basic flux coating that is resistant to subsequent moisture reabsorption which ensures very low as opposed to low weld metal hydrogen levels* and thus the absence of weld metal and HAZ hydrogen embrittlement.
(Note : very low hydrogen levels = H2 < 5 ml/100g; low hydrogen levels = H2 < 10 ml/100g)
Weld metal with low levels of oxygen and non-metallic inclusions which imparts great resistance to solidification cracking on exceptionally thick sections under great restraints. The higher the Mn-Si ratio, the greater the resistance to solidification cracking. For the class of electrode they represent, exceptional sub-zero toughness values are obtained, eg: general purpose types assure toughness values to at least -30 ºC, the higher manganese alloyed types to at least -50 ºC and the nickel alloyed types to -80 ºC. Both strength and toughness properties of the weld metal are maintained after most weld stress relief heat treatments.

RD-360U VAC PACK AWS A5.1 E7016

Part No.	Size	Amp	Weight
WER0020	2.5mm x 350mm	50 - 85	2 Kg
WER0021	3.2mm x 350mm	75 - 125	2 Kg
WER0022	4.0mm x 400mm	130 - 170	2 Kg
WER0023	5.0mm x 400mm	170 - 220	2 Kg

Approvals: LR, CE

RD-718 AWS A5.1 E7018 Low Hydrogen

Part No.	Size	Amp	Weight
WER0030	2.5mm x 350mm	50 - 100	5 Kg
WER0031	3.2mm x 350mm	90 - 140	5 Kg
WER0032	4.0mm x 450mm	130 - 180	5 Kg
WER0033	5.0mm x 450mm	170 - 220	5 Kg

Approvals: LR, ABS, BKI, CE

RD-718 VAC PACK AWS A5.1 E7018 Low Hydrogen

Part No.	Size	Amp	Weight
WER0035	2.5mm x 350mm	50 - 100	2 Kg
WER0036	3.2mm x 350mm	90 - 140	2 Kg
WER0037	4.0mm x 400mm	130 - 180	2 Kg
WER0038	5.0mm x 400mm	170 - 220	2 Kg

Approvals: LR, ABS, BKI, CE

RD-718-1 VAC PACK AWS A5.1 E7018-1 Low Hydrogen

Part No.	Size	Amp	Weight
WER0024	2.5mm x 350mm	50 - 85	2 Kg
WER0025	3.2mm x 400mm	75 - 125	2 Kg
WER0026	4.0mm x 400mm	130 - 170	2 Kg
WER0027	5.0mm x 400mm	180 - 220	2 Kg

Approvals: LR, CE

RD- 51 Corten Electrodes AWS A5.5 E8018-W2

Part No.	Size	Amp	Weight
WER0236	2.5mm x 350mm	65 - 110	5 Kg
WER0237	3.2mm x 350mm	90 - 150	5 Kg
WER0238	4.0mm x 350mm	130 - 190	5 Kg
WER0239	5.0mm x 350mm	180 - 240	5 Kg

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NIKKO STEEL BUILT ON QUALITY & TECHNOLOGY

NIKKO STEEL ELECTRODES

High Tensile Steel Electrodes

RD- 18G AWS A5.5 E8018-G

Part No.	Size	Amp	Weight
WER0173	2.5mm x 300mm	60 - 100	4 Kg
WER0174	3.2mm x 350mm	90 - 150	4 Kg
WER0175	4.0mm x 350mm	120 - 200	4 Kg
WER0176	5.0mm x 350mm	180 - 250	4 Kg

Approvals: LR, CE

RD- 98B3 AWS A5.5 E9018-B3

Part No.	Size	Amp	Weight
WER0240	2.5mm x 350mm	60 - 100	5 Kg
WER0241	3.2mm x 450mm	90 - 150	5 Kg
WER0242	4.0mm x 450mm	140 - 190	5 Kg
WER0243	5.0mm x 450mm	180 - 200	5 Kg

RD-100D2 AWS A5.5 E10018-D2

Part No.	Size	Amp	Weight
WER0178	2.5mm x 300mm	60 - 100	4 Kg
WER0179	3.2mm x 350mm	90 - 150	4 Kg
WER0180	4.0mm x 350mm	140 - 190	4 Kg
WER0181	5.0mm x 350mm	180 - 240	4 Kg

Approvals: CE

RD-118G AWS A5.5 E11018-G

Part No.	Size	Amp	Weight
WER0183	2.5mm x 300mm	70 - 100	4 Kg
WER0184	3.2mm x 350mm	90 - 130	4 Kg
WER0185	4.0mm x 350mm	110 - 170	4 Kg
WER0186	5.0mm x 350mm	160 - 230	4 Kg

Approvals: CE

NS-320 AWS A5.5 E12018-G

Part No.	Size	Amp	Weight
WER0188	2.5mm x 300mm	60 - 100	4 Kg
WER0189	3.2mm x 350mm	100 - 140	4 Kg
WER0190	4.0mm x 350mm	130 - 190	4 Kg
WER0191	5.0mm x 350mm	190 - 240	4 Kg

NS-340 AWS A5.5 E14018-G

Part No.	Size	Amp	Weight
WER0193	2.5mm x 300mm	60 - 100	4 Kg
WER0194	3.2mm x 350mm	100 - 140	4 Kg
WER0195	4.0mm x 350mm	130 - 190	4 Kg
WER0196	5.0mm x 350mm	190 - 240	4 Kg

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WELDING CONSUMABLES

NIKKO STEEL BUILT ON QUALITY & TECHNOLOGY

NIKKO STEEL ELECTRODES

Austenitic Stainless Steel Electrodes

Ferritic/Martensitic stainless have chromium levels of 12% - 18% as the main alloying element and have carbon levels to enable air hardening to a predominantly martensitic structure. Accordingly, detailed attention must be paid to both pre-heat and PWHT during and after welding.

Standard austenitics are those in the ASTM 3XX series and should, in the main, be welded with matching electrodes and for all fabricational purposes should be considered non-hardenable, non-heat treatable and thus show no PWHT requirement.

NSB-307 AWS A5.4 E307-16

Approvals: CE

Part No.	Size	Amp	Weight
WER0050	2.5mm x 300mm	80 - 120	1 Kg
WER0051	3.2mm x 350mm	100 - 150	1 Kg
WER0052	4.0mm x 350mm	140 - 190	1 Kg
WER0053	5.0mm x 350mm	170 - 220	1 Kg

NSK-307 AWS A5.4 E307-17

Part No.	Size	Amp	Weight
WER0218	2.5mm x 300mm	55 - 85	4 Kg
WER0219	3.2mm x 350mm	75 - 120	4 Kg
WER0220	4.0mm x 350mm	100 - 160	4 Kg
WER0221	5.0mm x 350mm	140 - 200	4 Kg

NSK-308L AWS A5.4 E308L-17

Approvals: CE

Part No.	Size	Amp	Weight
WER0060	2.0mm x 300mm	40 - 60	1 Kg
WER0061	2.5mm x 300mm	55 - 85	1 Kg
WER0062	2.5mm x 300mm	55 - 85	4 Kg
WER0063	3.2mm x 350mm	75 - 120	1 Kg
WER0064	3.2mm x 350mm	75 - 120	4 Kg
WER0065	4.0mm x 350mm	100 - 160	1 Kg
WER0066	4.0mm x 350mm	100 - 160	4 Kg
WER0067	5.0mm x 350mm	140 - 200	4 Kg

NSB-309L AWS A5.4 E309L-16

Approvals: CE

Part No.	Size	Amp	Weight
WER0070	2.0mm x 300mm	35 - 80	1 Kg
WER0071	2.0mm x 300mm	35 - 80	4 Kg
WER0072	2.5mm x 300mm	65 - 100	1 Kg
WER0073	2.5mm x 300mm	65 - 100	4 Kg
WER0074	3.2mm x 350mm	80 - 125	1 Kg
WER0075	3.2mm x 350mm	80 - 125	5 Kg
WER0076	4.0mm x 350mm	120 - 170	1 Kg
WER0077	4.0mm x 350mm	120 - 170	5 Kg
WER0078	5.0mm x 350mm	160 - 210	5 Kg

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NIKKO STEEL BUILT ON QUALITY & TECHNOLOGY

NIKKO STEEL ELECTRODES

Austenitic Stainless Steel Electrodes

NSK-309L AWS A5.4 E309L-17

Part No.	Size	Amp	Weight
WER0222	2.5mm x 300mm	55 - 85	4 Kg
WER0223	3.2mm x 350mm	75 - 120	4 Kg
WER0224	4.0mm x 350mm	100 - 160	4 Kg
WER0225	5.0mm x 350mm	140 - 200	4 Kg

NSK-309LMo AWS A5.4 E309LMo-17

Approvals: CE

Part No.	Size	Amp	Weight
WER0226	2.5mm x 300mm	55 - 85	4 Kg
WER0227	3.2mm x 350mm	75 - 120	4 Kg
WER0228	4.0mm x 350mm	100 - 160	4 Kg
WER0229	5.0mm x 350mm	140 - 200	4 Kg

NSB-310 AWS A5.4 E310-16

Part No.	Size	Amp	Weight
WER0080	2.5mm x 300mm	65 - 100	1 Kg
WER0081	2.5mm x 300mm	65 - 100	4 Kg
WER0082	3.2mm x 350mm	80 - 125	1 Kg
WER0083	3.2mm x 350mm	80 - 125	5 Kg
WER0084	4.0mm x 350mm	120 - 170	1 Kg
WER0085	4.0mm x 350mm	120 - 170	5 Kg

NSK-316L AWS A5.4 E316L-17

Approvals: CE

Part No.	Size	Amp	Weight
WER0090	1.6mm x 250mm	20 - 40	3 Kg
WER0091	2.0mm x 300mm	40 - 60	1 Kg
WER0092	2.0mm x 300mm	40 - 60	4 Kg
WER0093	2.5mm x 300mm	55 - 85	1 Kg
WER0094	2.5mm x 300mm	55 - 85	4 Kg
WER0095	3.2mm x 350mm	75 - 120	1 Kg
WER0096	3.2mm x 350mm	75 - 120	4 Kg
WER0097	4.0mm x 350mm	100 - 160	1 Kg
WER0098	4.0mm x 350mm	100 - 160	4 Kg
WER0099	5.0mm x 350mm	140 - 200	4 Kg

NS-E330H AWS A5.4 E330H-15 Nearest

Part No.	Size	Amp	Weight
WER0205	2.5mm x 300mm	65 - 95	4 Kg
WER0206	3.2mm x 350mm	80 - 130	4 Kg
WER0207	4.0mm x 350mm	110 - 160	4 Kg
WER0208	5.0mm x 350mm	140 - 190	4 Kg

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WELDING CONSUMABLES

NIKKO STEEL ELECTRODES

Austenitic Stainless Steel Electrodes

NSB-347 AWS A5.4 E347-16

Approvals: CE

Part No.	Size	Amp	Weight
WER0054	2.5mm x 300mm	65 - 100	1 Kg
WER0055	3.2mm x 350mm	80 - 125	1 Kg
WER0056	4.0mm x 350mm	120 - 170	1 Kg

NSB- 410 AWS A5.4 E410-26

Part No.	Size	Amp	Weight
WER0209	2.5mm x 300mm	65 - 100	4 Kg
WER0210	3.2mm x 350mm	80 - 125	4 Kg
WER0211	4.0mm x 350mm	120 - 170	4 Kg
WER0212	5.0mm x 350mm	160 - 210	4 Kg

NSB- E410-NiMo-26 AWS A5.4 E410NiMo-26

Part No.	Size	Amp	Weight
WER0213	2.5mm x 300mm	65 - 100	4 Kg
WER0214	3.2mm x 350mm	80 - 125	4 Kg
WER0215	4.0mm x 350mm	120 - 170	4 Kg
WER0216	5.0mm x 350mm	160 - 210	4 Kg

ND- 2209 AWS A5.4 E2209-17

Approvals: CE

Part No.	Size	Amp	Weight
WER0057	2.5mm x 300mm	65 - 100	1 Kg
WER0058	3.2mm x 350mm	80 - 125	1 Kg
WER0059	4.0mm x 350mm	120 - 170	1 Kg

Dissimilar Electrodes

NSK-312 AWS A5.4 E312-17

Approvals: CE

Part No.	Size	Amp	Weight
WER0107	2.0mm x 300mm	30 - 60	12 Rods
WER0100	2.5mm x 300mm	55 - 85	1 Kg
WER0101	2.5mm x 300mm	55 - 85	4 Kg
WER0102	3.2mm x 350mm	75 - 120	1 Kg
WER0103	3.2mm x 350mm	75 - 120	4 Kg
WER0104	4.0mm x 350mm	100 - 160	1 Kg
WER0105	4.0mm x 350mm	100 - 160	4 Kg
WER0106	5.0mm x 350mm	150 - 200	4 Kg

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NIKKO STEEL ELECTRODES

Cast Iron Electrodes

With maintenance welding, often the component to be repaired is of unknown specification or a high carbon steel casting or a cast iron. Both of which are known to have poor weldability. Thus, consumables for maintenance welding have an inbuilt safety factor in terms of the degree of dilution they can tolerate with a wide range of base materials without detracting from the ductility or strength of the weld metal. The inbuilt safety factor is also extended as the weld deposits for problem steels diffuse hydrogen quickly through the molten weld pool, so protecting the heat affected zones from hydrogen embrittlement.

CIN-1 AWS A5.15 ENi-C1
Pure Nickel Cast Iron Electrodes

Approvals: CE

Part No.	Size	Amp	Weight
WER0115	2.5mm x 300mm	50 - 80	1 Kg
WER0230	2.5mm x 300mm	50 - 80	4 Kg
WER0116	3.2mm x 350mm	70 - 110	1 Kg
WER0231	3.2mm x 350mm	70 - 110	4 Kg
WER0117	4.0mm x 350mm	100 - 140	1 Kg
WER0232	4.0mm x 350mm	100 - 140	4 Kg

CIN-2 AWS A5.15 ENiFe-C1
Ferro Nickel Cast Iron Electrodes

Approvals: CE

Part No.	Size	Amp	Weight
WER0120	2.5mm x 300mm	50 - 80	1 Kg
WER0233	2.5mm x 300mm	50 - 80	4 Kg
WER0121	3.2mm x 350mm	70 - 110	1 Kg
WER0234	3.2mm x 350mm	70 - 110	4 Kg
WER0122	4.0mm x 350mm	100 - 140	1 Kg
WER0235	4.0mm x 350mm	100 - 140	4 Kg

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WELDING CONSUMABLES

NIKKO STEEL ELECTRODES

Hardfacing Electrodes

This range of electrodes is designed to cover a full range of hardfacing, surfacing and build-up applications either as a preventative measure on new components or a rectification repair to worn components.
Depending on the application, the properties sought in the application may be resistant to impact, abrasion, erosion, corrosion, resistant to oxidation, high temperature hardness and toughness or the ability of the deposit to work harden without distortion. Unlike the majority of welding electrodes, not every electrode in this range is covered by international specification.

HV-350 Rutile Type (Low OCV)

Part No.	Size	Amp	Weight
WER0140	3.2mm x 350mm	90 - 140	5 Kg
WER0141	4.0mm x 400mm	140 - 180	5 Kg
WER0142	5.0mm x 400mm	190 - 240	5 Kg

As Welded 150ºC Pre-Heat	HRC	HV
1st Layer	24	260
2nd Layer	32	320
3rd Layer	39	380

Approvals: CE

HV-600 Rutile Type (Low OCV) AWS A5.13 EFe3

Part No.	Size	Amp	Weight
WER0145	3.2mm x 350mm	90 - 130	5 Kg
WER0146	4.0mm x 400mm	130 - 170	5 Kg
WER0147	5.0mm x 400mm	160 - 200	5 Kg

As Welded 150ºC Pre-Heat	HRC	HV
1st Layer	50	520
2nd Layer	55	600
3rd Layer	58	690

Approvals: CE

HV-700 Rutile Type (Low OCV)

Part No.	Size	Amp	Weight
WER0163	3.2mm x 350mm	110 - 150	5 Kg
WER0164	4.0mm x 400mm	150 - 200	5 Kg
WER0165	5.0mm x 400mm	200 - 240	5 Kg

As Welded 150ºC Pre-Heat	HRC	HV
1st Layer	45-50	450-500
2nd Layer	54-58	600-660
3rd Layer	56-60	620-700

Approvals: CE

HV-800 Rutile Type (Low OCV)

Part No.	Size	Amp	Weight
WER0166	3.2mm x 350mm	100 - 150	5 Kg
WER0167	4.0mm x 400mm	130 - 180	5 Kg
WER0168	5.0mm x 400mm	170 - 230	5 Kg

Approvals: CE

HV-900 Rutile Type (Low OCV)

Part No.	Size	Amp	Weight
WER0154	3.2mm x 350mm	110 - 160	4 Kg
WER0155	4.0mm x 350mm	150 - 220	4 Kg
WER0156	5.0mm x 350mm	190 - 270	4 Kg

Approvals: CE

HV-1000 Rutile Type (Low OCV)

Part No.	Size	Amp	Weight
WER0169	3.2mm x 350mm	110 - 150	5 Kg
WER0170	4.0mm x 400mm	150 - 220	5 Kg
WER0171	5.0mm x 400mm	200 - 260	5 Kg

Approvals: CE

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WELDING CONSUMABLES

NIKKO STEEL ELECTRODES

Hardfacing Electrodes

HV-350B Min. 70 OCV

Part No.	Size	Amp	Weight
WER0130	3.2mm x 350mm	90 - 140	5 Kg
WER0131	4.0mm x 400mm	140 - 180	5 Kg
WER0132	5.0mm x 400mm	190 - 240	5 Kg

As Welded 150ºC Pre-Heat	HRC	HV
1st Layer	24	260
2nd Layer	32	320
3rd Layer	39	380

Approvals: CE

HV-600B AWS A5.13 EFe3 Min. 70 OCV

Part No.	Size	Amp	Weight
WER0135	3.2mm x 350mm	90 - 140	5 Kg
WER0136	4.0mm x 400mm	140 - 180	5 Kg
WER0137	5.0mm x 400mm	190 - 240	5 Kg

As Welded 150ºC Pre-Heat	HRC	HV
1st Layer	50	520
2nd Layer	55	600
3rd Layer	58	690

Approvals: CE

Cobalt Based Alloys

Grade 6 (AWS A5.13 ECoCr-A)

Part No.	Size	Amp	Weight
WER0251	3.2mm x 350mm	80 - 130	4 Kg
WER0252	4.0mm x 350mm	120 - 170	4 Kg

Gouging Electrodes

NSG- Gouging of All Metals

Part No.	Size	Amp	Weight
WER0109	2.5mm x 300mm	90 - 120	4 Kg
WER0110	3.2mm x 350mm	150 - 200	4 Kg
WER0111	4.0mm x 400mm	230 - 270	4 Kg
WER0112	5.0mm x 400mm	290 - 330	4 Kg

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NIKKO STEEL ELECTRODES

Nickel Based Alloys

In this range of electrodes the nickel content exceeds the sum total of all other alloying elements, thus the term nickel based electrode. The electrode range includes types for welding nickel, monel, nickel molybdenum alloys, nickel chrome iron alloys, nickel and chrome molybdenum alloys. Several electrodes in this range also can be used for surfacing. All the electrodes deposit weld metal with advantageous corrosion resistant properties. The higher alloyed NiCrMo and NiCrFe types possess a combination of notch toughness at -196ºC and resistance to oxidation and creep at temperatures up to 1000 ºC.

The NiCrMo and NiCrFe types are also ideally suited to welding steel plate clad with nickel based alloy or stainless steel. Further the NiCrMo and NiCrFe variants are the only viable option for welding ferritic CrMo steels to stainless steels when heat and creep resistant properties are mandatory.
Additionally, the ENiCrFe-3 electrode is well suited to the repair of high carbon steel cast components, particularly when PWHT is involved, not only because of its ability to tolerate high dilution and provide matching strength levels, but also because its ductility and toughness are unimpaired by such heat treatment.

NCM-276 AWS A5.11 ENiCrMo-4

Part No.	Size	Amp	Weight
WER0201	2.5mm x 350mm	60 - 100	4 Kg
WER0202	3.2mm x 350mm	90 - 130	4 Kg
WER0203	4.0mm x 350mm	130 - 180	4 Kg

Approvals: CE

NCF AWS A5.11 ENiCrFe-3

Part No.	Size	Amp	Weight
WER0197	2.5mm x 300mm	50 - 90	4 Kg
WER0198	3.2mm x 350mm	80 - 130	4 Kg
WER0199	4.0mm x 350mm	120 - 170	4 Kg

Approvals: CE

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MILD STEEL ELECTRODES

ECO E6013 Mild Steel Electrodes

AWS A5.1 E6013

Part No.	Size	Amp	Weight
WER0497	2.5mm x 350mm	50 - 80	2.5 Kg
WER0498	3.2mm x 350mm	80 - 130	2.5 Kg
WER0499	4.0mm x 400mm	120 - 180	2.5 Kg
WER0496	5.0mm x 400mm	160 - 240	2.5 Kg

Weldarc E6013 Mild Steel Electrodes

AWS A5.1 E6013

Part No.	Size	Amp	Weight
WER0500	2.5mm x 350mm	50 - 80	5 Kg
WER0501	3.2mm x 350mm	80 - 130	5 Kg
WER0502	4.0mm x 400mm	120 - 180	5 Kg

Hyundai S-6013LF Mild Steel Electrodes

AWS A5.1 E6013

Part No.	Size	Amp	Weight
WER0246	2.5mm x 350mm	50 - 95	5 Kg
WER0247	3.2mm x 350mm	80 - 130	5 Kg
WER0248	4.0mm x 400mm	120 - 180	5 Kg
WER0249	5.0mm x 450mm	160 - 230	5 Kg
WER0250	6.0mm x 450mm	220 - 300	5 Kg

HYUNDAI WELDING

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WELDING CONSUMABLES

T & R ELECTRODES

Mild Steel Electrodes

TRUWELD E7016-1 - VAC PACK

(EUROTROD BD 22)- Low Hydrogen, Twin Coated AWS A5.1 E7016

Part No.	Size	Amp
WER2115	2.5mm x 350mm	60 - 90
WER2116	3.2mm x 450mm	95 - 150
WER2117	4.0mm x 450mm	110 - 180

Approvals: CE

*Please note random packet weights.

Tubular Hard Surfacing Electrodes

TRUALLOY 33

An alloy rich in chromium, Mn and C in an austenitic matrix. High resistance to abrasion and conditions with medium impact.

Part No.	Size	Amp	Weight
WER2145	6.0mm x 450mm	80 - 130	5 Kg
WER2146	8.0mm x 450mm	140 - 190	5 Kg
WER2147	11.0mm x 450mm	190 - 260	5 Kg

Hardness
1st Layer: 52 - 56 HRC
2nd Layer: 58 - 61 HRC

TRUALLOY 35

An alloy rich in CR, Mn, V, B, Mo and Carbon in a tough austenitic matrix. Very high resistance to abrasion, combined with medium to higher resistance to impact.

Part No.	Size	Amp	Weight
WER2150	6.0mm x 450mm	80 - 130	5 Kg
WER2151	8.0mm x 450mm	140 - 190	5 Kg
WER2152	11.0mm x 450mm	190 - 260	5 Kg

Hardness
1st Layer: 58 - 62 HRC

TRUALLOY 37

A high concentration of complex chromium carbides with Nb, Mo, Mn and V. Very high resistance to abrasion and reasonable impact, particularly at higher temperatures.

Part No.	Size	Amp	Weight
WER2155	6.0mm x 450mm	80 - 130	5 Kg
WER2156	8.0mm x 450mm	140 - 190	5 Kg
WER2157	11.0mm x 450mm	190 - 260	5 Kg

Hardness
1st Layer: 55 - 58 HRC
2nd Layer: 58 - 61 HRC

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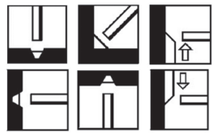
ESAB ELECTRODES

MILDTRODE 46.00 (AWS A5.1 E6013)

Part No.	Size	Amp	Weight
WER2266	1.6mm x 300mm	30 - 60	2 Kg
WER2267	2.0mm x 300mm	50 - 70	2.1 Kg
WER2268	2.5mm x 350mm	60 - 100	5.5 Kg
WER2269	3.2mm x 350mm	80 - 150	5.5 Kg
WER2271	4.0mm x 350mm	100 - 200	5.4 Kg
WER2272	4.0mm x 450mm	100 - 200	7.1 Kg
WER2273	5.0mm x 450mm	150 -290	7.2 Kg



NUFIVE (AWS A5.1 E6011)

Part No.	Size	Amp	Weight
WER2283	2.5mm x 350mm		20 Kg
WER2284	3.2mm x 350mm		20 Kg
WER2285	4.0mm x 350mm		16 Kg

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TUNGSTEN ELECTRODES

0.8% Zirconiated White Tip Tungstens

Part No.	Description
WER2000	0.8mm x 150mm - 0.8% Zirconiated White (1/32”)
WER2001	1.0mm x 150mm - 0.8% Zirconiated White (1/25”)
WER2002	1.2mm x 150mm - 0.8% Zirconiated White (3/64”)
WER2003	1.6mm x 150mm - 0.8% Zirconiated White (1/16”)
WER2004	2.4mm x 150mm - 0.8% Zirconiated White (3/32”)
WER2005	3.2mm x 150mm - 0.8% Zirconiated White (1/8”)
WER2006	4.0mm x 150mm - 0.8% Zirconiated White (5/32”)
WER2007	4.8mm x 150mm - 0.8% Zirconiated White (3/16”)
WER2008	6.4mm x 150mm - 0.8% Zirconiated White (1/4”)

2% Thoriated Red Tip Tungstens

Part No.	Description
WER2010	0.8mm x 150mm - 2% Thoriated Red (1/32”)
WER2011	1.0mm x 150mm - 2% Thoriated Red (1/25”)
WER2012	1.2mm x 150mm - 2% Thoriated Red (3/64”)
WER2013	1.6mm x 150mm - 2% Thoriated Red (1/16”)
WER2014	2.4mm x 150mm - 2% Thoriated Red (3/32”)
WER2015	3.2mm x 150mm - 2% Thoriated Red (1/8”)
WER2016	4.0mm x 150mm - 2% Thoriated Red (5/32”)
WER2017	4.8mm x 150mm - 2% Thoriated Red (3/16”)
WER2018	6.4mm x 150mm - 2% Thoriated Red (1/4”)

2% Ceriated Grey Tip Tungstens

Part No.	Description
WER2020	0.8mm x 150mm - 2% Ceriated Grey (1/32”)
WER2021	1.0mm x 150mm - 2% Ceriated Grey (1/25”)
WER2022	1.2mm x 150mm - 2% Ceriated Grey (3/64”)
WER2023	1.6mm x 150mm - 2% Ceriated Grey (1/16”)
WER2024	2.4mm x 150mm - 2% Ceriated Grey (3/32”)
WER2025	3.2mm x 150mm - 2% Ceriated Grey (1/8”)
WER2026	4.0mm x 150mm - 2% Ceriated Grey (5/32”)
WER2027	4.8mm x 150mm - 2% Ceriated Grey (3/16”)
WER2028	6.4mm x 150mm - 2% Ceriated Grey (1/4”)

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TUNGSTEN ELECTRODES

Multi Type Gold Tip Tungstens 1.5% Lanthanated

Part No.	Description
WER2030	0.8mm x 150mm - Multi Type Gold (1/32”)
WER2031	1.0mm x 150mm - Multi Type Gold (1/25”)
WER2032	1.2mm x 150mm - Multi Type Gold (3/64”)
WER2033	1.6mm x 150mm - Multi Type Gold (1/16”)
WER2034	2.4mm x 150mm - Multi Type Gold (3/32”)
WER2035	3.2mm x 150mm - Multi Type Gold (1/8”)
WER2036	4.0mm x 150mm - Multi Type Gold (5/32”)
WER2037	4.8mm x 150mm - Multi Type Gold (3/16”)
WER2038	6.4mm x 150mm - Multi Type Gold (1/4”)

1% Lanthanated Black Tip Tungstens

Part No.	Description
WER2040	0.8mm x 150mm - Lanthanated Black (1/32”)
WER2041	1.0mm x 150mm - Lanthanated Black (1/25”)
WER2042	1.2mm x 150mm - Lanthanated Black (3/64”)
WER2043	1.6mm x 150mm - Lanthanated Black (1/16”)
WER2044	2.4mm x 150mm - Lanthanated Black (3/32”)
WER2045	3.2mm x 150mm - Lanthanated Black (1/8”)
WER2046	4.0mm x 150mm - Lanthanated Black (5/32”)
WER2047	4.8mm x 150mm - Lanthanated Black (3/16”)
WER2048	6.4mm x 150mm - Lanthanated Black (1/4”)

2% Lanthanated Dark Blue Tip Tungstens

Part No.	Description
WER2050	0.8mm x 150mm - Lanthanated Dark Blue (1/32”)
WER2051	1.0mm x 150mm - Lanthanated Dark Blue (1/25”)
WER2052	1.2mm x 150mm - Lanthanated Dark Blue (3/64”)
WER2053	1.6mm x 150mm - Lanthanated Dark Blue (1/16”)
WER2054	2.4mm x 150mm - Lanthanated Dark Blue (3/32”)
WER2055	3.2mm x 150mm - Lanthanated Dark Blue (1/8”)
WER2056	4.0mm x 150mm - Lanthanated Dark Blue (5/32”)
WER2057	4.8mm x 150mm - Lanthanated Dark Blue (3/16”)
WER2058	6.4mm x 150mm - Lanthanated Dark Blue (1/4”)

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WELDING CONSUMABLES

TUNGSTEN ELECTRODES

Combined (WR) Turquoise Blue

Part No.	Description
WER2060	0.8mm x 150mm - Combined WR (1/32”)
WER2061	1.0mm x 150mm - Combined WR (1/25”)
WER2062	1.2mm x 150mm - Combined WR (3/64”)
WER2063	1.6mm x 150mm - Combined WR (1/16”)
WER2064	2.4mm x 150mm - Combined WR (3/32”)
WER2065	3.2mm x 150mm - Combined WR (1/8”)
WER2066	4.0mm x 150mm - Combined WR (5/32”)
WER2067	4.8mm x 150mm - Combined WR (3/16”)
WER2068	6.4mm x 150mm - Combined WR (1/4”)

Combined (WR) Purple

Part No.	Description
WER2069	1.6mm x 150mm - Combined WR (1/16”)
WER2070	2.4mm x 150mm - Combined WR (3/32”)
WER2071	3.2mm x 150mm - Combined WR (1/8”)

For tungsten grinders please see page 78

WELDMIG MILD STEEL MIG WIRE

WELDMIG ER70S-6 (SG2) MIG Welding Wire

AWS A5.18 ER70S-6, SG2, G3Si1, EN14341

WELDMIG ER70S-6 is a copper coated mild steel welding wire suitable for welding low and medium tensile steels.

Approvals: CE, LR, BV, TUV,DB, ABS,DNV, CCS

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.80	1.40
Welding Process:	MIG	
Gas:	Ar-Co2	Co2

Part No.	Diameter	Weight
WER1160	0.6 mm	0.7 Kg
WER1161	0.8 mm	0.7 Kg
WER1162	1.0 mm	0.7 Kg
WER1163	1.2 mm	0.7 Kg
WER1165	0.6 mm	5 Kg
WER1166	0.8 mm	5 Kg
WER1167	1.0 mm	5 Kg
WER1168	1.2 mm	5 Kg

Part No.	Diameter	Weight
WER1169	0.6 mm	15 Kg
WER1170	0.8 mm	15 Kg
WER1171	1.0 mm	15 Kg
WER1172	1.2 mm	15 Kg
WER1173	1.6 mm	15 Kg
WER1174	0.8 mm	250 Kg
WER1175	1.0 mm	250 Kg
WER1176	1.2 mm	250 Kg

EVO 2 ER70S-6 (SG2) Non Coppered MIG Welding Wire

AWS A5.18 ER70S-6, SG2, G3Si1, EN14341

EVO 2 ER70S-6 is an European manufactured non coppered mild steel welding wire suitable for welding low and medium tensile steels.

Approvals: CE, TUV, DB, CWB, RINA, NAWC (NAKS)

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.85	1.45
Welding Process:	MIG	
Gas:	Ar-Co2	Co2

Part No.	Diameter	Weight
WER1180	0.8 mm	15 Kg
WER1181	1.0 mm	15 Kg
WER1182	1.2 mm	15 Kg

Part No.	Diameter	Weight
WER1184	0.8 mm	250 Kg
WER1185	1.0 mm	250 Kg
WER1186	1.2 mm	250 Kg

*** Please See Page 533 for fittings and top hats for bulk packs.**

WELDING CONSUMABLES

MILD STEEL MIG WIRE

ECO ER70S-6 (SG2) MIG Welding Wire

AWS A5.18 ER70S-6, SG2, G3Si1, EN14341

ECO ER70S-6 is a copper coated mild steel welding wire suitable for welding low and medium tensile steels.

Approvals: CE, LR, BV, TUV, DB, ABS, DNV, CCS

Part No.	Diameter	Weight
WER1240	0.8 mm	15 Kg
WER1241	1.0 mm	15 Kg
WER1242	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.80	1.40
Welding Process:	MIG	
Gas:	Ar-Co2	Co2

ECO ER70S-6 (SG3) MIG Welding Wire

AWS A5.18 ER70S-6, SG3, G4Si1, EN14341

ECO ER70S-6 is a copper coated mild steel welding wire with increased silicon and manganese for improved UTS.

Approvals: CE, LR, BV,TUV, DB, ABS, DNV, CCS

Chemical Analysis (WT%)

C	Si	Mn
0.10	1.00	1.75
Welding Process:	MIG	
Gas:	Ar-Co2	Co2

Part No.	Diameter	Weight
WER1190	0.8 mm	15 Kg
WER1191	1.0 mm	15 Kg
WER1192	1.2 mm	15 Kg

Part No.	Diameter	Weight
WER1194	0.8 mm	250 Kg
WER1195	1.0 mm	250 Kg
WER1196	1.2 mm	250 Kg

*** Please See Page 533 for fittings and top hats for bulk packs.**

E-mail: sales@weldfastuk.co.uk Web: www.weldfastuk.co.uk

MILD STEEL MIG WIRE

TRUMIG ER70S-6 (SG2) MIG Welding Wire

AWS A5.18 ER70S-6, SG2, G3Si1, EN14341

T&R (SG2) is a copper coated mild steel welding wire suitable for welding low and medium tensile steels.

Approvals: CE, LR, BV, TUV, DB, ABS, DNV, CCS

Part No.	Diameter	Weight
WER2170	0.8 mm	15 Kg
WER2171	1.0 mm	15 Kg
WER2172	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.80	1.40
Welding Process:	MIG	
Gas:	Ar-Co2	Co2

HYUNDAI SM70-E (SG2) MIG Welding Wire

AWS A5.18 ER70S-6, SG2, G3Si1, EN14341

SM70-E (SG2) is a premium copper coated mild steel welding wire suitable for welding low and medium tensile steels.

Approvals: CE, LR, BV,TUV, DB, ABS,DNV, CCS, GL, NK, CWB, NAKS, M

Part No.	Diameter	Weight
WER2286	0.8 mm	15 Kg
WER2287	1.0 mm	15 Kg
WER2288	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.83	1.48
Welding Process:	MIG	
Gas:	Ar-Co2	Co2

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WELDING CONSUMABLES

WELDMIG FLUX CORED MIG WIRE

WELDMIG Gasless Flux Cored Mig Welding Wire

AWS A5.20 : E71T-GS

The WELDMIG gasless flux cored mig welding wire is a self-shielded wire for DIY & automotive repair and maintenance applications.

Part No.	Diameter	Weight
WER1220	0.8 mm	0.45 Kg
WER1221	0.9 mm	0.45 Kg
WER1225	0.9 mm	0.90 Kg
WER1223	0.8 mm	4.5 Kg
WER1224	0.9 mm	4.5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Al
0.25	0.50	0.91	0.19
Welding Process:	MIG		
Gas:	Not required		

WELDMIG E71T-1M Flux Cored Mig Welding Wire

AWS A5.20 : E71T-1M

WELDMIG E71T-1M flux cored can be used for high efficiency welding in all positions & excellent welding performance.

Approvals: CE, TUV, DB, CWB

Part No.	Diameter	Weight
WER1227	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S
0.03	0.51	1.26	0.010	0.011
Welding Process:	MIG			
Gas:	Ar-Co2			

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HYUNDAI WELDING FLUX/ METAL CORED MIG WIRE

SUPERSHIELD 11

AWS A5.20 ASME SFA 5.20, E71T-11, EN ISO 17632-A-T 42 Z Z Z N1

Hyundai Supershield 11 is a premium quality self shielded flux cored wire designed for single & multi pass welding of low and medium tensile steels not exceeding 510 Mpa

Part No.	Diameter	Weight
WER2294	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Al
0.19	0.35	0.6	0.011	0.006	1.2
Welding Process:	MIG	Current:		DC-	
Gas:	Not Required				

SUPERCORED 71MAG

AWS A5.20/ASME SFA5.20 E71T-1M/-9M EN ISO 17632-A-T 42 3 P M1

Approvals: ABS, LR, BV, DNV, GL, TUV, CWB, CE, DB, RINA

Hyundai Supercored 71MAG is a premium quality flux cored wire giving excellent bead appearance, low spatter and a soft arc.

Part No.	Diameter	Weight
WER2289	1.0 mm	15 Kg
WER2290	1.2mm	15 Kg
WER2291	1.6mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S
0.04	0.54	1.25	0.011	0.012
Welding Process:	MIG	Current:		DC+
Gas:	Ar-Co2/ Co2			

SUPERCORED 70NS

AWS A5.18 ASME SF A5.18 E70C-6M EN ISO 17632-A-T 42 3 M M 3 H5M1

Approvals: ABS, LR, BV, DNV, GL, TUV, CWB, CE, DB, RINA

Hyundai Supercored 70NS is a premium quality Metal Cored wire which combines high deposition rates of FCW with high efficiencies of a solid wire, provides exceptionally smooth and stable arc,low spatter and minimal slag coverage.

Part No.	Diameter	Weight
WER2292	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S
0.05	0.55	1.45	0.013	0.01
Welding Process:	MIG	Current:		DC+
Gas:	Ar-Co2/ Co2			

SUPERCORED 81MAG

AWS A5.29 ASME SFA5.29 E81T1-Ni1 M H4 EN ISO 17632-A-T 46 6 1Ni P M 2 H5

Approvals: ABS, LR, BV, DNV, GL, TUV, CWB, CE, DB, RINA, MRS

Hyundai Supercord 81MAG is a premium quality all positional Titania flux cored wire that will provide excellent toughness at low temperature, not only as welded but also stress releived state.

Part No.	Diameter	Weight
WER2295	1.0 mm	15 Kg
WER2293	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Ni
0.05	0.28	1.2	0.008	0.012	0.93
Welding Process:	MIG	Current:		DC+	
Gas:	Ar-Co2				

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MILD STEEL LOW ALLOY MIG WIRE

ITALFIL A15 MIG Welding Wire

AWS A5.18 ER70S-2, BS EN1668:1997: W2Ti A15

ITALFIL A15 is a triple deoxidised mild steel welding wire and is ideal for welding carbon steel especially tube.

Approvals: CE, TUV, DB

Part No.	Diameter	Weight
WER1200	0.8 mm	15 Kg
WER1201	1.0 mm	15 Kg
WER1202	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Al
0.05	0.55	1.20	0.10
Welding Process:	MIG	Gas:	Ar-Co2 Co2

ITALFIL ER80S-D2 A31 MIG Welding Wire

AWS A5.28 ER80S-D2, EN ISO 14341-A-G-4Mo

ITALFIL A31 is for joining or overlays of creep resistant manganese Moly steels that operate at elevated temperatures around 500°C. Typical applications include pressure vessels and pipe work.

Part No.	Diameter	Weight
WER1215	0.8 mm	15 Kg
WER1216	1.0 mm	15 Kg
WER1217	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo
0.08	0.70	1.80	0.50
Welding Process:	MIG	Gas:	Ar-Co2

ITALFIL ER80S-D2 A32 MIG Welding Wire

AWS A5.28 ER80S-B2, EN ISO 21952-B-1CM

ITAFIL A32 is for joining or overlays of 1.25% / 0.25% CrMo Steels.

Part No.	Diameter	Weight
WER1205	0.8 mm	15 Kg
WER1206	1.0 mm	15 Kg
WER1207	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	S	P	Mo
0.08	0.55	0.60	1.30	0.02	0.02	0.55
Welding Process:	MIG		Gas:	Ar-Co2		

ITALFIL ER90S-B3 A33 MIG Welding Wire

AWS A5.28 ER90S-B3, EN ISO 21952-B-2C1M

ITALFIL A33 is suitable for welding of Cr-Mo Alloyed steels, resistant to high temperatures, corrosion and attack of sulphured agents. Welding of 2 1/4 Cr 1Mo steels.

Part No.	Diameter	Weight
WER1210	0.8 mm	15 Kg
WER1211	1.0 mm	15 Kg
WER1212	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	S	P	Mo
0.08	0.06	0.60	2.50	0.008	0.007	1.00
Welding Process:	MIG		Gas:	Ar-Co2		

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WELDING CONSUMABLES

MILD STEEL LOW ALLOY MIG WIRE

ITALFIL Corten MIG Welding Wire

AWS A5.28 ER80S-G (ER80S-W), EN440, G3Nil

ITALFIL Corten is for the welding of weather resistant fine grain steels.

Part No.	Diameter	Weight
WER1685	0.8 mm	15 Kg
WER1686	1.0 mm	15 Kg
WER1687	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo
0.08	0.08	1.40	0.80
Welding Process:	MIG		
Gas:	Ar-Co2		

ITALFIL ER80S-Ni1 MIG Welding Wire

AWS A5.28 ER80S-Ni1, EN ISO 14341- A G3Ni1

ITALFIL ER80S-Ni1 is for welding of fine grained low alloyed steels and Austenpering steels.

Part No.	Diameter	Weight
WER2492	0.8 mm	15 Kg
WER2493	1.0 mm	15 Kg
WER2494	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.09	0.70	1.2	0.15	0.25	0.15	0.015	0.015	1	0.03
Welding Process:	MIG			Gas:		Ar + 1.5% O2			

ITALFIL ER80S-Ni2 MIG Welding Wire

AWS A5.28 ER80S-Ni2, EN ISO 14341- A G50 9 M23 2Ni2

ITALFIL ER80S-Ni2 is for welding applications to -60°C on mild steel, low alloy steels and fine grain steels.

Approvals: CE, TUV, DB

Part No.	Diameter	Weight
WER2495	0.8 mm	15 Kg
WER2496	1.0 mm	15 Kg
WER2497	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.08	0.5	1.1	0.15	0.25	0.15	0.015	0.015	2.5	0.03
Welding Process:	MIG			Gas:		Ar + 1.5% O2			

ITALFIL ER80S-B8 MIG Welding Wire

AWS A 5.28 ER80S-B8 EN ISO 21952-A-G CrMo9Si

ITALFIL ER80S-B8 is suitable for welding mild steel, low alloy steels and good resistance to strain, cracking, oxidation and high temperature corrosion.

Part No.	Diameter	Weight
WER2507	1.0 mm	15 Kg
WER2508	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni
0.07	0.45	0.55	1	0.25	9	0.02	0.018	2.5
Welding Process:	MIG			Gas:		Ar + 1.5% O2		

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MILD STEEL LOW ALLOY MIG WIRE

ITALFIL ER90S-G MIG Welding Wire

AWS A5.28 ER90S-G, EN ISO 21952- A-G CrMo2Si

ITALFIL ER90S-G is suitable for welding Cr-Mo Alloyed steels, resistance to high temperatures, wear impact stress and corrosion.

Part No.	Diameter	Weight
WER2498	0.8 mm	15 Kg
WER2499	1.0 mm	15 Kg
WER2500	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.07	0.6	1	1	0.25	2.5	0.015	0.012	0.1	0.03

Welding Process:	MIG	Gas:	Ar-Co2, O2

ITALFIL ER100S-G MIG Welding Wire

AWS A5.28 ER100S-G, EN ISO 16834 Mn3NiCrMo

ITALFIL ER100S-G is for welding of NiCrMo fine grained steels for low temperature applications.

Part No.	Diameter	Weight
WER2509	0.8 mm	15 Kg
WER2510	1.0 mm	15 Kg
WER2511	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni
0.08	0.75	1.4	0.25	0.25	0.55	0.015	0.015	0.6

Welding Process:	MIG	Gas:	Ar-Co2, O2

ITALFIL ER110S-G MIG Welding Wire

AWS A5.28 ER110S-G, EN ISO 16834-A-G 69 2 M21 Mn3Ni1CrMo

ITALFIL ER110S-G is a low alloy wire with NiCrMo suitable for single pass or multi-pass welding of low alloy steels.

Approvals: CE, TUV, DB

Part No.	Diameter	Weight
WER2512	0.8 mm	15 Kg
WER2513	1.0 mm	15 Kg
WER2514	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.08	0.6	1.6	0.3	0.25	0.3	0.015	0.015	1.5	0.1

Welding Process:	MIG	Gas:	Ar-Co2, O2

ITALFIL ER120S-G MIG Welding Wire

AWS A5.28 ER120S-G, EN ISO 16834-A-G 89 4 M21 Mn4Ni2.5CrMo

ITALFIL ER120S-G is for the welding of fine grain steels, Austenpering steels giving high yield strength.

Approvals: CE, DB

Part No.	Diameter	Weight
WER2515	0.8 mm	15 Kg
WER2516	1.0 mm	15 Kg
WER2517	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.11	0.7	1.9	0.5	0.25	0.5	0.015	0.015	2.5	0.03

Welding Process:	MIG	Gas:	Ar-Co2, O2

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MIG BRAZING WIRE

WELDMIG CuSi3 (C9) MIG Copper Brazing Wire

The automotive and light fabrication industries now recognise the importance of MIG Brazing in the repair of collision damaged vehicles and some fabricated items. New welding procedures will now include the joining of high strength and galvanised materials utilising the MIG Brazing process.
Cebora are at the forefront in the development of high quality welding equipment with the MIG Brazing function approved by leading vehicle and industry manufacturers.

Recent changes to material types along with application requirements have made MIG Brazing ever more popular for solving some welding issues. MIG Brazing involves the non-fusion joining of certain materials requiring reduced effects of heat transfer in the weld zone, it allows the joining of dissimilar, galvanised and high strength steels through the MIG deposition of a low temperature Copper Silicon Brazing filler wire.
There are various types of Brazing filler wire, however, the automotive and light manufacturing sectors generally use a 3% Copper Silicon wire commonly known as Cusi3.

WELDMIG CuSi3 is a copper wire containing 3% silicon and 1% Manganese used for welding materials of similar composition e.g. copper alloys, brass & steel. It is commonly used within the motor industry for welding of zinc coated steel.
BS 2901 1990 PT3 C9 CuSi3

Part No.	Diameter	Weight
WER1150	0.8 mm	0.7 Kg
WER1151	1.0 mm	0.7 Kg
WER1152	0.8 mm	5 Kg
WER1153	1.0 mm	5 Kg
WER1154	1.2 mm	5 Kg
WER1155	0.8mm	15 Kg
WER1156	1.0mm	15 Kg
WER1157	1.2mm	15 Kg

Chemical Analysis (WT%)

Cu	Mn	Si
96	1.00	3.00

Welding Process:	MIG
Gas:	Ar , Ar-Helium

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WELDMIG COPPER/BRONZE MIG WIRE

WELDMIG C7 Copper MIG Welding Wire

AWS A5.7 ERCu EN ISO 24373 Cu1898 CuSn1

WELDMIG C7 is for welding of copper, producing a deoxidised pure copper deposit.

Part No.	Diameter	Weight
WER2462	0.8 mm	4 Kg
WER2463	1.0 mm	4 Kg
WER2464	1.2 mm	4 Kg
WER2465	0.8 mm	12.5 Kg
WER2466	1.0 mm	12.5 Kg
WER2467	1.2 mm	12.5 Kg

Chemical Analysis (WT%)

Cu	Si	Mn
98	0.1	0.1
Welding Process:	MIG	
Gas:	Argon	

WELDMIG C11 Phospher Bronze MIG Welding Wire

AWS A5.7 ERCuSn6P EN ISO 24373 Cu5180

WELDMIG C11 is for welding of phospher bronze, tin bronze, cast iron, Gunmetal & repairing of cast copper alloys.

Part No.	Diameter	Weight
WER2468	0.8 mm	4 Kg
WER2469	1.0 mm	4 Kg
WER2470	1.2 mm	4 Kg
WER2471	0.8 mm	12.5 Kg
WER2472	1.0 mm	12.5 Kg
WER2473	1.2 mm	12.5 Kg

Chemical Analysis (WT%)

Cu	Sn
93	7
Welding Process:	MIG
Gas:	Argon

WELDMIG C13 Aluminium Bronze MIG Welding Wire

AWS A5.7 ERCuAl-A2 EN ISO 24373 Cu6180 CuAl10Fe

WELDMIG C13 is for joining & repairing of Aluminium bronze castings, giving increased resistance to wear & brazing.

Part No.	Diameter	Weight
WER2474	0.8 mm	4 Kg
WER2475	1.0 mm	4 Kg
WER2476	1.2 mm	4 Kg
WER2477	0.8 mm	12.5 Kg
WER2478	1.0 mm	12.5 Kg
WER2479	1.2 mm	12.5 Kg

Chemical Analysis (WT%)

Cu	Al	Fe
89	10	1
Welding Process:	MIG	
Gas:	Argon	

WELDMIG C28 Aluminium Bronze MIG Welding Wire

AWS A5.7 ERCuAl-A1 EN ISO 24373 Cu6100 CuAl7

WELDMIG C28 is for surfacing applications & giving good resistance to corrosion on aluminium bronzes & CMn Steels.

Part No.	Diameter	Weight
WER2486	0.8 mm	4 Kg
WER2487	1.0 mm	4 Kg
WER2488	1.2 mm	4 Kg
WER2489	0.8 mm	12.5 Kg
WER2490	1.0 mm	12.5 Kg
WER2491	1.2 mm	12.5 Kg

Chemical Analysis (WT%)

Cu	Al
92	8
Welding Process:	MIG
Gas:	Argon

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WELDING CONSUMABLES

WELDMIG HARDFACING MIG WIRE

HF350 Solid Hardfacing MIG Welding Wire

DIN 8555, MSG 2-GZ-350

WELDMIG HF350 is a solid copper coated MIG welding wire for the overlay of all Carbon/Manganese steels. It is suitable for surfacing of parts that are subject to wear and impact. It is also possible to machine and will work harden. Hardness 325 - 375 HRC.

Part No.	Diameter	Weight
WER1228	1.0 mm	5 Kg
WER1230	1.0 mm	15 Kg
WER1229	1.2 mm	5 Kg
WER1231	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Cu	Mo
0.068	0.55	0.90	6.0	0.25	0.90
Welding Process:	MIG				
Gas:	Ar-Co2				

HF600 Solid Hardfacing MIG Welding Wire

DIN 8555, MSG 6-GZ-60

WELDMIG HF600 is a solid copper coated MIG welding wire for the overlay of all Carbon/Manganese steels. It is suitable for surfacing of parts that are subject to wear and impact. It is possible to finish by grinding. Hardness 550 - 600 HRC.

Approvals: DB

Part No.	Diameter	Weight
WER1233	1.0 mm	5 Kg
WER1235	1.0 mm	15 Kg
WER1234	1.2 mm	5 Kg
WER1236	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr
0.45	3.0	0.40	9.30
Welding Process:	MIG		
Gas:	Ar-Co2		

Selfsheild 600 Flux Cored Hard Facing MIG Wire

WELDMIG Selfshield 600 is a selfshieldling MIG Wire with a good balance of abrasion and impact resistance. Excellent weldability from such a hard alloy Selfshield 600 can be used with or without gas. Suitable for Bulldozer blades, excavator teeth, crusher jaws, bucket lips, scraper blades and chutes.

Part No.	Diameter	Weight
WER1237	1.2 mm	15 Kg

As Welded 150ºC Pre-Heat	HRC	HV
1st Layer	45	447
2nd Layer	56	612
3rd Layer	58	653

Chemical Analysis (WT%)

C	Si	Mn	Cr
0.8	0.8	2	2.5
Welding Process:	MIG		
Gas:	Not required		

Filtub Dur 16

DIN 8555:MSG 6-GF-C1-60 GP/ MSG 6-GF-M21-60 GP EN 14700 : T Fe 2

Filtub Dur 16 is a metal cored medium alloy flux-cored wire recommended for highly wear resistant surfacing. The deposit is tough, free of cracks and porosity and therefore is highly resistant to deformation and impact. On base material with low weldability is recommended depositing a buffer layer with 307 grade wire. The preheat and interpass temperature must be at least 200°C. Weld deposit can be machined only by grinding. Suitable for surfacing parls of: mixer blades and vessels, grab and bucket teethes, crusher hammers and jaws, etc

Part No.	Diameter	Weight
WER2557	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Mo
0.45	0.60	1.60	5.50	0.80
Welding Process:	MIG			
Gas:	Co2 Ar-Co2			

Hardness: 56 - 60 HRC
The hardness of the deposit depending on the relevant welding conditions and the chemical composition of the base metal.

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WELDMIG ALUMINIUM MIG WIRE

1070 (1050A) Aluminium MIG Welding Wire

AWS A5.10 92 ER1100 EN 18273-S 2004 AL1100

Part No.	Diameter	Weight
WER1004	1.0 mm	7 Kg
WER1005	1.2 mm	7 Kg
WER1006	1.6 mm	7 Kg

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Zn	Ti	Al
0.20	0.25	0.04	0.03	0.03	0.04	0.03	99.7

Parent Metals:	Non-heat treatable aluminium in 1000 series. AlMn alloys 3003, 3103, 3105 where the best colour matching after anodising is required.
Welding Process:	MIG
Gas:	Argon
Anodising:	Good
Corrosion Resistance:	Good

4043 AlSi5 (NG21) Aluminium MIG Welding Wire

AWS A5.10 92 ER4043 EN 18273-S 2004 AL4043

Part No.	Diameter	Weight
WER1010	0.8 mm	0.5 Kg
WER1011	1.0 mm	0.5 Kg
WER1012	1.2 mm	0.5 Kg
WER1013	0.8 mm	2 Kg
WER1014	1.0 mm	2 Kg
WER1015	1.2 mm	2 Kg
WER1016	0.8 mm	5 Kg
WER1017	1.0 mm	7 Kg
WER1018	1.2 mm	7 Kg
WER1019	1.6 mm	7 Kg
WER1021	2.4 mm	7 Kg

Chemical Analysis (WT%)

Si	Fe	Cu	Zn	Ti	Al
4.5-6.0	0.8	0.3	0.1	0.2	Bal

Parent Metals:	AlMgSi (6000 series) alloys e.g. 6063, 6082 cast alloys of aluminium silicon type.
Welding Process:	MIG
Gas:	Argon
Anodising:	Poor
Corrosion Resistance:	Good (Depending on parent alloy)

4047 AlSi12 Aluminium MIG Welding Wire

AWS A5.10 92 ER4047 EN 18273-S 2004 AL4047

Part No.	Diameter	Weight
WER1039	1.0 mm	7 Kg
WER1040	1.2 mm	7 Kg
WER1041	1.6 mm	7 Kg

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Zn	Al
11-13	0.8	0.3	0.15	0.1	0.2	Bal

Parent Metals:	AlMgSi (6000 series) alloy e.g. 6063,6082 cast alloys of aluminium silicon type. Not recommended for welding of AlMg alloys.
Welding Process:	MIG
Gas:	Argon
Anodising:	Poor
Corrosion Resistance:	Good (Depending on parent alloy)

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WELDMIG ALUMINIUM MIG WIRE

5183 AlMg4.5Mn0.7 Aluminium MIG Welding Wire

AWS A5.10 92 ER5183 EN 18273-S 2004 AL5183

Part No.	Diameter	Weight
WER1051	1.0 mm	7 Kg
WER1052	1.2 mm	7 Kg
WER1053	1.6 mm	7 Kg

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
0.4	0.4	0.1	0.5-1	4.3-5.2	0.05-0.2	0.25	0.15	Bal

Parent Metals:	5000 (AlMg) series alloys and 7000 (AlZn & AlZnMg) series.
Welding Process:	MIG
Gas:	Argon
Anodising:	Fair
Corrosion Resistance:	Fair

5356 AlMg5Cr (NG6) Aluminium MIG Welding Wire

AWS A5.10 92 ER5356 EN 18273-S 2004 AL5356

Part No.	Diameter	Weight
WER1025	0.8 mm	0.5 Kg
WER1026	1.0 mm	0.5 Kg
WER1027	1.2 mm	0.5 Kg
WER1028	0.8 mm	2 Kg
WER1029	1.0 mm	2 Kg
WER1030	1.2 mm	2 Kg
WER1031	0.8 mm	5 Kg
WER1032	1.0 mm	7 Kg
WER1033	1.2 mm	7 Kg
WER1034	1.6 mm	7 Kg

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Cr	Zn	Ti	Al
0.25	0.4	0.1	4.5-5.5	0.05-0.2	0.1	0.06-0.20	Bal

Parent Metals:	5000 series alloys (AlMg) with Mg<4%, 6000 (AlMgSi) alloys when anodised. Cast alloys of AlSi -Mg type. In practice the most versatile & universally used filler metal.
Welding Process:	MIG
Gas:	Argon
Anodising:	Excellent
Corrosion Resistance:	Excellent (Very good in marine applications)

5556 AlMg5Mn Aluminium MIG Welding Wire

AWS A5.10 92 ER5556 EN 18273-S 2004 AL5556

Part No.	Diameter	Weight
WER1060	1.2 mm	0.5 Kg
WER1061	1.0 mm	7 Kg
WER1062	1.2 mm	7 Kg
WER1063	1.6 mm	7 Kg

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Zn	Ti	Al
0.25	0.4	0.1	0.8	5.0-5.5	0.2	0.05-0.20	Bal

Parent Metals:	5000 (AlMg) series alloys with high Mg content.
Welding Process:	MIG
Gas:	Argon
Anodising:	Good
Corrosion Resistance:	Fair

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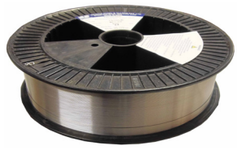
WELDING CONSUMABLES

STAINLESS STEEL MIG WIRE

Nevinox 307Si Stainless Steel MIG Wire

AWS A5.9 ER307Si BS EN 12072 2000 18.8 Mn

Nevinox 307Si is ideal for the joining of austenitic stainless steel to carbon steels as well as joining wear plates and providing a buffer layer prior to hardfacing.



Approvals: CE, TUV

Part No.	Diameter	Weight
WER1075	0.8 mm	5 Kg
WER1100	0.8 mm	15 Kg
WER1076	1.0 mm	5 Kg
WER1101	1.0 mm	15 Kg
WER1077	1.2 mm	5 Kg
WER1102	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.15	0.95	6.5	19.5	9.0
Welding Process:	MIG			
Gas:	ARG + 2% O2		ARG + 2-3% Co2	

Nevinox 308Lsi Stainless Steel MIG Wire

AWS A5.9 ER308Lsi EN 12072 2000 19.9

Nevinox 308Lsi is for welding austenitic stainless steel type 19Cr 10 Ni, 304 series and 321 stainless steels. Nevinox 308Lsi has increased silicon content that gives increased fluidity of the weld pool with minimum spatter.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1103	0.6 mm	0.7 Kg
WER1104	0.8 mm	0.7 Kg
WER1105	1.0 mm	0.7 Kg
WER1107	0.6 mm	5 Kg
WER1108	0.8 mm	5 Kg
WER1109	1.0 mm	5 Kg
WER1110	1.2 mm	5 Kg

Part No.	Diameter	Weight
WER1111	0.8 mm	15 Kg
WER1112	1.0 mm	15 Kg
WER1113	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.012	0.85	1.9	19.5	10.5
Welding Process:	MIG			
Gas:	ARG + 2% O2		ARG + 2-3% Co2	

Nevinox 309Lsi Stainless Steel MIG Wire

AWS A5.9 ER309Lsi EN 12072 2000 23012

Nevinox 309Lsi is a high alloyed wire. It is for welding dissimilar steels e.g stainless steel to mild steel. Will give crack resistant welds under normal conditions. Nevinox 309Lsi has increased silicon content that gives increased fluidity of the weld pool with minimum spatter.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1078	0.8 mm	5 Kg
WER1116	0.8 mm	15 Kg
WER1079	1.0 mm	5 Kg
WER1117	1.0 mm	15 Kg
WER1080	1.2 mm	5 Kg
WER1118	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.02	0.6	1.9	23.5	12.5
Welding Process:	MIG			
Gas:	ARG + 2% O2		ARG + 2-3% Co2	

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nevinox WELDING WIRES

STAINLESS STEEL MIG WIRE

Nevinox 310 Stainless Steel MIG Wire

AWS A5.9 ER310 EN 12072 2000 25.20

Nevinox 310 is designed to weld high temperature steels up to 1100°C such as 310 grade stainless steel.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1081	0.8 mm	5 Kg
WER1121	0.8 mm	15 Kg
WER1082	1.0 mm	5 Kg
WER1122	1.0 mm	15 Kg
WER1083	1.2 mm	5 Kg
WER1123	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.11	0.45	1.7	25	20
Welding Process:	MIG			
Gas:	ARG + 2% O2		ARG + 2-3% Co2	

Nevinox 312 Stainless Steel MIG Wire

AWS A5.9 ER312 EN 12072 2000 29.9

Nevinox 312 is designed for welding tool steels, high strength steels and difficult to weld steels. It is also suitable for welding dissimilar steels e.g stainless steel to mild steel.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1084	0.8 mm	5 Kg
WER1126	0.8 mm	15 Kg
WER1085	1.0 mm	5 Kg
WER1127	1.0 mm	15 Kg
WER1086	1.2 mm	5 Kg
WER1128	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.10	1.0	0.6	29	9.0
Welding Process:	MIG			
Gas:	ARG + 2% O2		ARG + 2-3% Co2	

Nevinox 316Lsi Stainless Steel MIG Wire

AWS A5.9 ER316Lsi BS EN 12072 2000 19.12.3

Nevinox 316Lsi is for welding austenitic molybdenum stainless steel, 316 series, where corrosion resistance is required. It is ideal for use within the food & dairy industries. Nevinox 316Lsi has increased silicon content which improves the fluidity of the weld pool with minimum spatter.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1131	0.6 mm	0.7 Kg
WER1132	0.8 mm	0.7 Kg
WER1133	1.0 mm	0.7 Kg
WER1136	0.6 mm	5 Kg
WER1137	0.8 mm	5 Kg
WER1138	1.0 mm	5 Kg
WER1139	1.2 mm	5 Kg
WER1141	0.6 mm	12.5 Kg
WER1142	0.8 mm	15 Kg
WER1143	1.0 mm	15 Kg
WER1144	1.2 mm	15 Kg
WER1145	1.6 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni	Mo
0.01	0.85	1.85	18.5	10.5	2.5
Welding Process:	MIG				
Gas:	ARG + 2% O2		ARG + 2-3% Co2		

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WELDING CONSUMABLES

STAINLESS STEEL MIG WIRE

Nevinox 347 Stainless Steel MIG Wire

AWS A5.9 ER347 BS EN 12072 2000 19.9 Nb

Nevinox 347 is used for welding niobium stabilised steel type 19 Cr 9 Ni Ti or similar. It is also suitable for welding 321 & 347 stainless steels.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1087	0.8 mm	5 Kg
WER1146	0.8 mm	15 Kg
WER1088	1.0 mm	5 Kg
WER1147	1.0 mm	15 Kg
WER1089	1.2 mm	5 Kg
WER1148	1.2 mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.02	0.45	1.95	20	10
Welding Process:	MIG			
Gas:	ARG + 2% O2		ARG + 2-3% Co2	

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STAINLESS STEEL FLUX CORED MIG WIRE

SUPERCORED 308L

AWS A5.22 E308L T10-01/-4 EN ISO 17633-A-T 19 9 L R M/C 3

Hyundai Supercord 308L is a premium quality flux cored wire which as a rapid soilidifying slag which enables flat & horizontal positional welding. It gives a stable arc with minimal spatter.

Approvals: CE, TUV, DB

Part No.	Diameter	Weight
WER2325	0.9 mm	15 Kg
WER2326	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Cr	Ni
0.03	0.70	1.5	0.025	0.01	19.5	9.5
Welding Process:	MIG	Current:		DC+		
Gas:	Ar-Co2/ Co2					

SW 308L

AWS A5.22 E308L T1-1/-4 EN ISO 17633-A-T 19 9 L P M/C 2

Hyundai SW 308L is a premium quality all positional flux cored wire that benefits from a fast freezing slag system which assists the operator when welding out of position and performs equally as well when welding in the flat and horizontal position.

Approvals: ABS, LR, BV, DNV, CWB, CE, TUV, DB, NK

Part No.	Diameter	Weight
WER2327	0.9 mm	15 Kg
WER2328	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Cr	Ni
0.03	0.72	1.42	0.023	0.007	19.5	10
Welding Process:	MIG	Current:		DC+		
Gas:	Ar-Co2/ Co2					

SUPERCORED 309L

AWS A5.22 E309L T10-01/-4 EN ISO 17633-A-T 23 12 L R M/C 3

Hyundai Supercord 309L is a premium quality flux cored wire which contains a high ferrite level in its austenitic structure has excellent heat and corrosion resistibility. which enables flat & horizontal positional welding.It gives a stable arc with minimal spatter.

Approvals: TUV, CE, DB, BV, DNV, GL

Part No.	Diameter	Weight
WER2329	0.9 mm	15 Kg
WER2330	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Cr	Ni
0.03	0.70	1.5	0.025	0.01	23.5	12.5
Welding Process:	MIG	Current:		DC+		
Gas:	Ar-Co2/ Co2					

SW 309L

AWS A5.22 E309L T1-1/-4 EN ISO 17633-A-T 23 12 L P M/C 2

Hyundai SW 309L is a premium quality all positional flux cored wire that benefits from a fast freezing slag system which assists the operator when welding out of position and performs equally as well when welding in the flat and horizontal position.This wire contains a high ferrite level in its austenitic structure thus providing better weldability together with superior heat & corrosion resistance and excellent for welding of dissimilar joints where dilution from ferrite steel takes place.

Approvals: KR, ABS, LR, BV, DNV, TUV, CWB, CE, DB, NK, CRS

Part No.	Diameter	Weight
WER2331	0.9 mm	15 Kg
WER2332	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Cr	Ni
0.03	0.65	1.3	0.025	0.01	23	12.3
Welding Process:	MIG	Current:		DC+		
Gas:	Ar-Co2/ Co2					

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WELDING CONSUMABLES

HYUNDAI WELDING

STAINLESS STEEL FLUX CORED MIG WIRE

SUPERCORED 316L

AWS A5.22 E316L T0-01/-4 EN ISO 17633-A-T 19 12 3 L R M/C 3

Hyundai Supercord 316L is a premium quality flux cored wire giving good arc stability & easy slag removal due to its low carbon content and its excellent resitance against granular corrosion. It is suitable for flat & horizontal positional welding. It gives a stable arc and minimal spatter.

Approvals: TUV, CE, DB, BV, DNV, GL

Part No.	Diameter	Weight
WER2333	0.9 mm	15 Kg
WER2334	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Cr	Ni	Mo
0.003	0.70	1.4	0.025	0.01	18	12	2.5
Welding Process:	MIG	Current:		DC+			
Gas:	Ar-Co2/ Co2						

SW 316L

AWS A5.22 E316L T1-1/-4 EN ISO 17633-A-T 19 12 3 L P M/C 2

Hyundai SW 316L is a premium quality all positional flux cored wire that benefits from a fast freezing slag system which assists the operator when welding out of position and performs equally as well when welding in the flat and horizontal position.

Approvals: KR, ABS, LR, BV, DNV, GL, TUV, CWB, CE, DB, CCS

Part No.	Diameter	Weight
WER2335	0.9 mm	15 Kg
WER2336	1.2mm	15 Kg

Chemical Analysis (WT%)

C	Si	Mn	P	S	Cr	Ni	Mo
0.03	0.70	1.4	0.025	0.01	18	12	2.5
Welding Process:	MIG	Current:		DC+			
Gas:	Ar-Co2/ Co2						

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ITALFIL

MILD STEEL LOW ALLOY TIG WIRE

ITALFIL A15 TIG Welding Wire

AWS A5.18 ER70S-2 BS2901 A15

ITALFIL A15 is a triple deoxidised copper coated mild steel filler rod for the joining of mild steel. It gives porosity free welds and is ideal for root runs in pipework.

Part No.	Diameter	Weight
WER1660	1.0 mm	5 Kg
WER1661	1.2 mm	5 Kg
WER1662	1.6 mm	5 Kg
WER1663	2.4 mm	5 Kg
WER1664	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Al
0.05	0.55	1.2	0.1
Welding Process:	TIG		
Gas:	Argon		

ITALFIL A18 TIG Welding Wire

AWS A5.18 ER70S-6 BS2901 A18

ITALFIL A18 is a double deoxidised copper coated mild steel filler rod for the joining of carbon manganese steels up to 510 MPA. It is ideal for root runs in pipework and thick walled materials.

Approvals: TUV, CE

Part No.	Diameter	Weight
WER1668	1.0 mm	5 Kg
WER1669	1.2 mm	5 Kg
WER1670	1.6 mm	5 Kg
WER1671	2.4 mm	5 Kg
WER1672	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.08	1.4
Welding Process:	TIG	
Gas:	Argon	

ITALFIL ER80S-Ni1 TIG Welding Wire

AWS A5.28 ER80S-Ni1, EN ISO 14341- A G3Ni1

ITALFIL ER80S-Ni1 is for welding of fine grained low alloyed and Austempering steels.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.09	0.70	1.2	0.15	0.25	0.15	0.015	0.015	1	0.03
Welding Process:	TIG			Gas:		Argon			

Part No.	Diameter	Weight
WER2518	1.2 mm	5 Kg
WER2519	1.6 mm	5 Kg
WER2520	2.4 mm	5 Kg
WER2521	3.2 mm	5 Kg

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WELDING CONSUMABLES

MILD STEEL LOW ALLOY TIG WIRE

ITALFIL ER80S-Ni2 TIG Welding Wire

AWS A5.28 ER80S-Ni2, EN ISO 14341- A G50 9 M23 2Ni2

ITALFIL ER80S-Ni2 is for welding applications to -60ºC on mild steel, low alloy steels and fine grain steels.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.08	0.5	1.1	0.15	0.25	0.15	0.015	0.015	2.5	0.03

Welding Process:	TIG	Gas:	Argon

Part No.	Diameter	Weight
WER2522	1.2 mm	5 Kg
WER2523	1.6 mm	5 Kg
WER2524	2.4 mm	5 Kg
WER2525	3.2 mm	5 Kg

ITALFIL ER80S-B2 A32 TIG Welding Wire

AWS ER80S-B2, EN 21952-B-1CM BS2901 A32

ITALFIL A32 is for the joining or overlay of 1.25% / 0.25% CrMo steels.

Chemical Analysis (WT%)

C	Si	Mn	Cr	S	P	Mo
0.08	0.55	0.6	1.3	0.02	0.02	0.55

Welding Process:	TIG	Gas:	Argon

Part No.	Diameter	Weight
WER1690	1.6 mm	5 Kg
WER1691	2.4 mm	5 Kg
WER1692	3.2 mm	5 Kg

ITALFIL ER80S-B8 TIG Welding Wire

AWS A 5.28 ER80S-B8 EN ISO 21952-A-G CrMo9Si

ITALFIL ER80S-B8 is suitable for welding mild steel, low alloy steels and good resistance to strain, cracking, oxidation and high temperature corrosion.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni
0.07	0.45	0.55	1	0.25	9	0.02	0.018	0.2

Welding Process:	TIG	Gas:	Argon

Part No.	Diameter	Weight
WER2538	1.2 mm	5 Kg
WER2539	1.6 mm	5 Kg
WER2540	2.4 mm	5 Kg
WER2541	3.2 mm	5 Kg

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MILD STEEL LOW ALLOY TIG WIRE

ITALFIL ER80S-D2 A31 TIG Welding Wire

AWS A5.28 ER80S-D2, EN 14341-A-G-4Mo, BS2901 Pt1 A31

ITALFIL A31 is for joining or overlays of creep resistant manganese Moly steels that operate at elevated temperatures around 500°C, Typical applications include pressure vessels and pipe work.

Part No.	Diameter	Weight
WER1679	1.0 mm	5 Kg
WER1680	1.6 mm	5 Kg
WER1681	2.4 mm	5 Kg
WER1682	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Mo
0.08	0.70	1.8	0.5
Welding Process:	TIG		
Gas:	Argon		

ITALFIL CORTEN TIG Welding Wire

AWS A5.28 ER80S-G (ER80S-W), EN440, G3Nil

ITALFIL Corten is for the welding of weather resistant fine grain steels.

Part No.	Diameter	Weight
WER1649	1.2 mm	5 Kg
WER1650	1.6 mm	5 Kg
WER1651	2.4 mm	5 Kg
WER1652	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni	Cu
0.08	0.80	1.40	0.3	0.80	0.35
Welding Process:	TIG		Gas:	Argon	

ITALFIL ER90S-B3 A33 TIG Welding Wire

AWS A5.28 ER90S-B3, EN21952-B-2C1M BS2901 A33

ITALFIL A33 is a low alloy copper rod with 2.25% / 1% CrMo content to be used for the welding of creep resistant steels, with a service temperature up to 600°C.

Part No.	Diameter	Weight
WER1695	1.6 mm	5 Kg
WER1696	2.4 mm	5 Kg
WER1697	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	S	P	Mo
0.08	0.06	0.6	2.5	0.01	0.007	1.0
Welding Process:	TIG			Gas:	Argon	

ITALFIL ER90S-G TIG Welding Wire

AWS A5.28 ER90S-G, EN ISO 21952- A-G CrMo2Si

ITALFIL ER90S-G is suitable for welding Cr-Mo Alloyed steels, resistance to high temperatures, wear impact stress and corrosion.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.07	0.6	1	1	0.25	2.5	0.015	0.012	0.1	0.03

Welding Process:	TIG	Gas:	Argon

Part No.	Diameter	Weight
WER2526	1.2 mm	5 Kg
WER2527	1.6 mm	5 Kg
WER2528	2.4 mm	5 Kg
WER2529	3.2 mm	5 Kg

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MILD STEEL LOW ALLOY TIG WIRE

ITALFIL ER100S-G TIG Welding Wire

AWS A5.28 ER100S-G, EN ISO 16834 Mn3NiCrMo

ITALFIL ER100S-G is for welding of NiCrMo fine grained steels for low temperature applications.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni
0.08	0.75	1.4	0.25	0.25	0.55	0.015	0.015	0.6

Welding Process: TIG Gas: Argon

Part No.	Diameter	Weight
WER2542	1.2 mm	5 Kg
WER2543	1.6 mm	5 Kg
WER2544	2.4 mm	5 Kg
WER2545	3.2 mm	5 Kg

ITALFIL ER110S-G TIG Welding Wire

AWS A5.28 ER110S-G, EN ISO 16834-A-G 69 2 M21 Mn3Ni1CrMo

ITALFIL ER110S-G is a low alloy wire with NiCrMo suitable for single pass or multi-pass welding of low alloy steels.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.08	0.6	1.6	0.3	0.25	0.3	0.015	0.015	1.5	0.1

Welding Process: TIG Gas: Argon

Part No.	Diameter	Weight
WER2546	1.2 mm	5 Kg
WER2547	1.6 mm	5 Kg
WER2548	2.4 mm	5 Kg
WER2549	3.2 mm	5 Kg

ITALFIL ER120S-G TIG Welding Wire

AWS A5.28 ER120S-G, EN ISO 16834-A-G 89 4 M21 Mn4Ni2.5CrMo

ITALFIL ER120S-G is for the welding of fine grain steels, Austenpering steels giving high yield strength.

Chemical Analysis (WT%)

C	Si	Mn	Mo	Cu	Cr	S	P	Ni	V
0.11	0.7	1.9	0.5	0.25	0.5	0.015	0.015	2.5	0.03

Welding Process: TIG Gas: Argon

Part No.	Diameter	Weight
WER2550	1.2 mm	5 Kg
WER2551	1.6 mm	5 Kg
WER2552	2.4 mm	5 Kg
WER2553	3.2 mm	5 Kg

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COPPER/BRONZE TIG WELDING WIRE

WELDTIG C7 Copper TIG Welding Wire

AWS A5.7 ERCu EN ISO 24373 Cu1898 CuSn1

WELDTIG C7 is for welding of copper, producing a deoxidised pure copper deposit.

Part No.	Diameter	Weight
WER2450	1.6 mm	5 Kg
WER2451	2.4 mm	5 Kg
WER2452	3.2 mm	5 Kg

Chemical Analysis (WT%)

Cu	Si	Mn
98	0.1	0.1
Welding Process:	TIG	
Gas:	Argon	

WELDTIG CuSi3 (C9) TIG Brazing Wire

BS 2901 1990 Pt3 C9 CuSi3

WELDTIG CuSi3 are copper rods containing 3% silicon and 1% Manganese used for welding of materials of similar composition e.g Copper alloys, brass and steel. It is commonly used within the motor industry for welding of Zinc coated steel.

Part No.	Diameter	Weight
WER1645	1.2 mm	5 Kg
WER1646	1.6 mm	5 Kg
WER1647	2.4 mm	5 Kg
WER1648	3.2 mm	5 Kg

Chemical Analysis (WT%)

Cu	Si	Mn
96	3.0	1.0
Welding Process:	TIG	
Gas:	Argon	

WELDTIG C11 Phospher Bronze TIG Welding Wire

AWS A5.7 ERCuSn6P EN ISO 24373 Cu5180

WELDTIG C11 is for welding of phospher bronze, tin bronze, cast iron, Gunmetal & repairing of cast copper alloys.

Part No.	Diameter	Weight
WER2453	1.6 mm	5 Kg
WER2454	2.4 mm	5 Kg
WER2455	3.2 mm	5 Kg

Chemical Analysis (WT%)

Cu	Sn
93	7
Welding Process:	TIG
Gas:	Argon

WELDTIG C13 Aluminium Bronze TIG Welding Wire

AWS A5.7 ERCuAl-A2 EN ISO 24373 Cu6180 CuAl10Fe

WELDTIG C13 is for joining & repairing of Aluminium bronze castings, giving increased resistance to wear & brazing.

Part No.	Diameter	Weight
WER2456	1.6 mm	5 Kg
WER2457	2.4 mm	5 Kg
WER2458	3.2 mm	5 Kg

Chemical Analysis (WT%)

Cu	Al	Fe
89	10	1
Welding Process:	TIG	
Gas:	Argon	

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WELDING CONSUMABLES

WELDTIG ALUMINIUM TIG RODS

WELDTIG 1070 (1050A) Aluminium TIG Welding Rods

AWS A5.10 92 ER1100 EN 18273-S 2004 AL1100

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Zn	Ti	Al
0.2	0.25	0.04	0.03	0.03	0.04	0.03	99.7

Part No.	Diameter	Weight
WER1500	1.6 mm	2.5 Kg
WER1502	2.4 mm	2.5 Kg
WER1503	3.2 mm	2.5 Kg

Parent Metals:	Non-heat treatable aluminium in 1000 series. AlMn alloys 3003, 3103, 3105 where the best colour matching after anodising is required.
Welding Process:	TIG
Gas:	Argon
Anodising:	Good
Corrosion Resistance:	Good

WELDTIG 4043 AlSi5 (NG21) Aluminium TIG Welding Rods

AWS A5.10 92 ER4043 EN 18273-S 2004 AL4043

Chemical Analysis (WT%)

Si	Fe	Cu	Zn	Ti	Al
4.5-6	0.8	0.3	0.1	0.2	Bal

Part No.	Diameter	Weight
WER1510	1.6 mm	2.5 Kg
WER1512	2.4 mm	2.5 Kg
WER1513	3.2 mm	2.5 Kg

Parent Metals:	AlMgSi (6000 series) alloys e.g. 6063, 6082 cast alloys of aluminium silicon type
Welding Process:	TIG
Gas:	Argon
Anodising:	Poor
Corrosion Resistance:	Good (Depending on parent alloy)

WELDTIG 4047 AlSi12 Aluminium TIG Rods

AWS A5.10 92 ER4047 EN 18273-S 2004 AL4047

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Zn	Al
11-13	0.8	0.3	0.15	0.1	0.2	Bal

Part No.	Diameter	Weight
WER1530	1.6 mm	2.5 Kg
WER1532	2.4 mm	2.5 Kg
WER1533	3.2 mm	2.5 Kg

Parent Metals:	AlMgSi (6000 series) alloys e.g. 6063, 6082 cast alloys of aluminium-silicon type. Not recommended for welding of AlMg Alloys.
Welding Process:	TIG
Gas:	Argon
Anodising:	Poor
Corrosion Resistance:	Good (Depending on parent alloy)

WELDTIG 5183 AlMg4.5Mn0.7 Aluminium TIG Rods

AWS A5.10 92 ER5183 EN 18273-S 2004 AL5183

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
0.4	0.4	0.1	0.5- 1	4.3-5.2	0.05-0.2	0.25	0.15	Bal

Part No.	Diameter	Weight
WER1540	1.6 mm	2.5 Kg
WER1542	2.4 mm	2.5 Kg
WER1543	3.2 mm	2.5 Kg

Parent Metals:	5000 (AlMg) series alloys and 7000 (AlZn & AlZnMg) series.
Welding Process:	TIG
Gas:	Argon
Anodising:	Fair
Corrosion Resistance:	Fair

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WELDTIG ALUMINIUM TIG RODS

WELDTIG 5356 AlMg5 (NG6) Aluminium TIG Rods

AWS A5.10 92 ER5356 EN 18273-S 2004 AL5356

Chemical Analysis (WT%)

Si	Fe	Cu	Mg	Cr	Zn	Ti	Al
0.25	0.04	0.1	4.5-5.5	0.05-0.2	0.1	0.06-0.2	Bal

Part No.	Diameter	Weight
WER1520	1.6 mm	2.5 Kg
WER1522	2.4 mm	2.5 Kg
WER1523	3.2 mm	2.5 Kg

Parent Metals:	5000 series alloys (AlMg) with Mg< 4%, 6000 (AlMgSi) alloys when anodised. Cast alloys of AlSi -Mg type. In practice the most versatile & universally used filler metal.
Welding Process:	TIG
Gas:	Argon
Anodising:	Excellent
Corrosion Resistance:	Excellent (Very good in marine applications)

WELDTIG 5556 AlMg5Mn Aluminium TIG Rods

AWS A5.10 92 ER5556 EN 18273-S 2004 AL5556

Chemical Analysis (WT%)

Si	Fe	Cu	Mn	Mg	Zn	Ti	Al
0.25	0.4	0.1	0.8	5-5.5	0.2	0.05-0.2	Bal

Part No.	Diameter	Weight
WER1550	1.6 mm	2.5 Kg
WER1552	2.4 mm	2.5 Kg
WER1553	3.2 mm	2.5 Kg

Parent Metals:	5000 (AlMg) series alloy, with high Mg content.
Welding Process:	TIG
Gas:	Argon
Anodising:	Good
Corrosion Resistance:	Fair

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WELDING CONSUMABLES

HARDFACING TIG RODS

WELDMIG HF350 TIG Rods

DIN 8555 MSG-2-GZ-350

ITALFIL HF350 is a solid copper coated TIG welding wire for the overlay of all Carbon/ Manganese steels. It is suitable for surfacing of parts that are subject to wear and impact. It is also possible to machine and will work harden. Hardness 325 - 375 HRC.

Part No.	Diameter	Weight
WER1673	1.6 mm	5 Kg
WER1674	2.4 mm	5 Kg
WER1675	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Cu	Mo
0.068	0.55	0.90	6.0	0.25	0.90
Welding Process:	TIG				
Gas:	Argon				

ITALFIL HF600 TIG Rods

DIN 8555 WSG6-GZ-60

ITALFIL HF600 is a solid copper coated MIG welding wire for the overlay of all Carbon/Manganese steels.
It is suitable for surfacing of parts that are subject to wear and impact. It is possible to finish by grinding.
Hardness 550 - 600 HRC.

Part No.	Diameter	Weight
WER1676	1.6 mm	5 Kg
WER1677	2.4 mm	5 Kg
WER1678	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr
0.45	3.0	0.40	9.30
Welding Process:	TIG		
Gas:	Argon		

STAINLESS STEEL FLUX CORED TIG RODS

WELDTIG 316L Flux cored Stainless Steel TIG Rods

AWS A5.22 R316L T1-5 EN ISO 6947 ASME IX 1F, 1G, 2F, 2G, 3F, 3G, 4F, 4G, 5Gup

WELDTIG 316L Flux cored stainless TIG rods is for root pass tig welding without the need for backing gas.

- Produces slag to protect the reverse side of the root pass from oxidation by the atmosphere.
- Saves the costs for back shielding gases.
- Eliminate gas purging down time.
- Perfectly suited for stainless steel pipe welding.

Thickness (mm)	Gap (mm)	Root Face (mm)	Current (A)
3-5	2	1	80-95
5-10	2.5	1	90-110
10	3	1	105-140

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni	Mo
0.03	0.50	0.90	18.5	12	2.8
Welding Process:	TIG				

Part No.	Diameter	Weight
WER2318	2.2 mm	1 Kg

***Also available in grades 308L, 309L, 347 to special order**

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STAINLESS STEEL TIG RODS

Nevinox 307Si Stainless Steel TIG Rods

AWS A5.9 ER307Si BS EN 12072 2000 18.8 Mn

Nevinox 307Si is ideal for the joining of austenitic stainless steel to carbon steels as well as joining wear plates & providing a buffer layer prior to hardfacing.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1600	0.8 mm	5 Kg
WER1601	1.0 mm	5 Kg
WER1602	1.2 mm	5 Kg
WER1603	1.6 mm	5 Kg
WER1604	2.4 mm	5 Kg
WER1605	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.15	0.95	6.5	19.5	9.0
Welding Process:	TIG			
Gas:	Argon			

Nevinox 308L Stainless Steel TIG Rods

AWS A5.9 ER308L EN 12072 2000 19.9 L

Nevinox 308L is for welding austenitic stainless steel, 304 series and 321 stainless steels.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1606	0.8 mm	5 Kg
WER1607	1.0 mm	5 Kg
WER1608	1.2 mm	5 Kg
WER1609	1.6 mm	5 Kg
WER1610	2.4 mm	5 Kg
WER1611	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.012	0.40	1.9	19.5	10.5
Welding Process:	TIG			
Gas:	Argon			

Nevinox 309L Stainless Steel TIG Rods

AWS A5.9 ER309L EN 12072 2000 23.12 L

Nevinox 309L is a high alloyed wire. It is for the welding of dissimilar steels e.g stainless steel to mild steel, will give crack resistant welds under normal conditions.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1616	1.0 mm	5 Kg
WER1617	1.2 mm	5 Kg
WER1618	1.6 mm	5 Kg
WER1619	2.4 mm	5 Kg
WER1620	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.02	0.06	1.9	23.5	12.5
Welding Process:	TIG			
Gas:	Argon			

Nevinox 310 Stainless Steel TIG Rods

AWS A5.9 ER310 EN 12072 2000 25.20

Nevinox 310 is designed to weld high temperature steels up to 1100°C such as 310 grade stainless steel.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1621	1.0 mm	5 Kg
WER1622	1.2 mm	5 Kg
WER1623	1.6 mm	5 Kg
WER1624	2.4 mm	5 Kg
WER1625	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.11	0.45	1.7	25	20
Welding Process:	TIG			
Gas:	Argon			

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nevinox® WELDING WIRES

STAINLESS STEEL TIG RODS

Nevinox 312 Stainless Steel TIG Rods

AWS A5.9 ER312 EN 12072 2000 29.9

Nevinox 312 is designed for welding tool steels, high strength and difficult to weld steels. It is also suitable for welding dissimilar steels e.g stainless steel to mild steel.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1626	1.0 mm	5 Kg
WER1627	1.2 mm	5 Kg
WER1628	1.6 mm	5 Kg
WER1629	2.4 mm	5 Kg
WER1630	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.1	1.0	0.6	29	9.0
Welding Process:	TIG			
Gas:	Argon			

Nevinox 316L Stainless Steel TIG Rods

AWS A5.9 ER316L 19.12.3

Nevinox 316L is for welding austenitic molybdenum stainless steel, 316 series where corrosion resistance is required. It is ideal for use in the food and dairy indsutries.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1631	0.8 mm	5 Kg
WER1632	1.0 mm	5 Kg
WER1633	1.2 mm	5 Kg
WER1634	1.6 mm	5 Kg
WER1635	2.4 mm	5 Kg
WER1636	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni	Mo
0.015	0.45	1.8	18.5	11.5	2.6
Welding Process:	TIG				
Gas:	Argon				

Nevinox 347 Stainless Steel TIG Rods

AWS A5.9 ER347 EN 12072 2000 19.9 Nb

Nevinox 347 is used for welding niobium stabilised steel. It is also suitable for welding 321 & 347 stainless steels.

Approvals: CE, TUV

Part No.	Diameter	Weight
WER1637	1.6 mm	5 Kg
WER1638	2.4 mm	5 Kg
WER1639	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn	Cr	Ni
0.02	0.45	1.95	20	10
Welding Process:	TIG			
Gas:	Argon			

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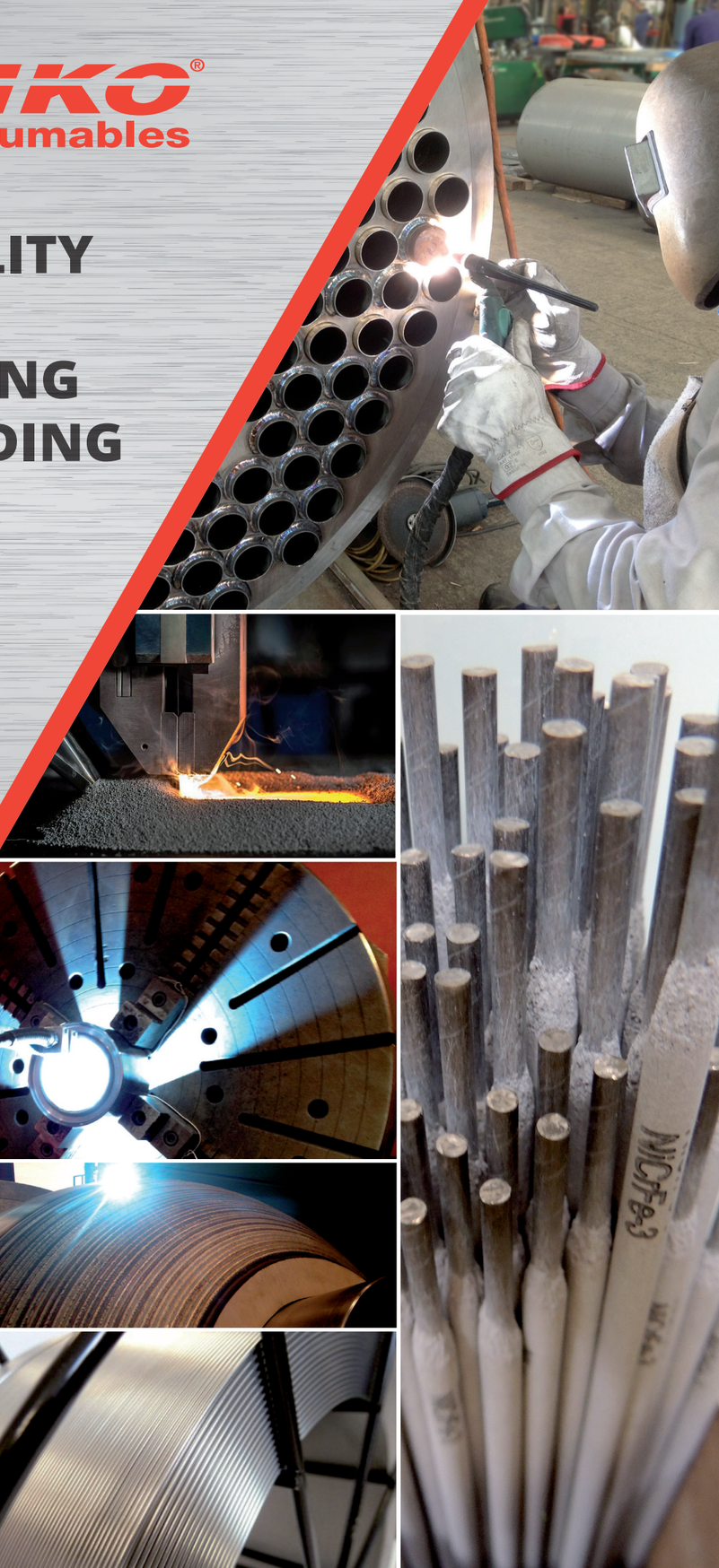
DAIKO® welding consumables

HIGH QUALITY PRODUCTS FOR WELDING AND CLADDING



NICROS DAIKO welding consumables

Certifications and Technical assistance

- UNI EN ISO 9001 quality system ICIM certificate nr.1245/3
- TuV certificate (nr. 0035-CPR-C908) for Factory Production Control system
- TuV approval of a qualified manufacturer of Welding Consumables pursuant to VdTuV 1153
- Technical assistance provided by qualified Welding Engineers I.W.E. nr.120085A

TÜV APPROVALS

Product	Tüv Approval No.
MIG Daiko SF 308LSi	**11857**
TIG Daiko SF 308L	**11865**
MIG Daiko SF 307Si	**11858**
MIG Daiko SF 309LSi	**11864**
TIG Daiko SF 309LSi	**11869**
MIG Daiko SF 316LSi	**11859**
TIG Daiko SF 316L	**11866**
MIG Daiko SF 318Si	**11860**
MIG Daiko SF 347Si	**11863**
MIG Daiko SF 2209	**11861**
TIG Daiko SF 2209	**11867**
MIG Daiko 82	**11862**
TIG Daiko 82	**06004**
MIG Daiko SF 625	**10735**
TIG Daiko SF 625	**11868**

It has always been Nicros' policy to select the largest and most qualified world producers of special alloys creating a solid partnership with them. This choice has allowed to develop, through strict and rigorous testing, a wide range of welding and cladding consumables under DAIKO brand: covered electrodes, solid wires and flux cored wires, strips and fluxes.

In this large range of products, particular attention is paid to Corrosion Resistant Alloys (CRA) and, especially, nickel alloys whereof our Top Product Daiko SF 625 is the absolute protagonist.
Another strength of the company is the large stock that ensures customers fast delivery of supplies.

Nicros is today a reliable and punctual partner, qualified by major and prestigious customers worldwide in: oil & gas, chemical and petrochemical, pressure vessels, valves, and generally wherever reliable and high quality consumable products are required.

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NICKEL ALLOY DAIKO SF 625

The hightest performance of our DAIKO SF 625, reached in many years of experience all around the world, are the best guarantees of a top quality product.
We ensure:
- analysis conforming to AwsA5.14, ERNiCrMo-3
- every batch made with strictly controlled chemical composition
- Fe content 0,3% max
- high quality weldability for all batches

Daiko 625 is approved by the biggest worldwide users of 625 alloys, particularly where robot welding system applications are needed.

DATA SHEET **DAIKO SF 625**
ERNiCrMo-3

Available in: Mig - Tig - Saw

Specifications: AWS A5.14 ER NiCrMo-3 | DIN 1736 SG-NiCr21 Mo9Nb (2.4831) | EN ISO 18274 Ni6625

Approvals: TÜV (Mig-Tig), CE

Applications:
Daiko SF 625 is designed to match the composition and properties of 625. This alloy is used for the high temperature strength and structural stability and is also used for its resistance to general corrosion, pitting, crevice and stress corrosion cracking in severe chloride media. Useful proprieties from -269°C to above 1000°C are achieved.
It is used for welding of alloy 625, alloy 825, alloy 25-6MO, and a range of high alloy austenitic and super austenitic stainless steels. It is also used for surfacing of steel, for welding 9% Ni steels, and for welding various corrosion-resistant alloys such as alloy 20. Applications include furnace equipment, petrochemical and power generation plants and also overlays on pumps, valves and shafts in offshore and marine environments where high pitting resistance (PRE = 50) is essential. Widely used in oil & gas production and process.

Typical composition %

C	Mn	Si	S	P	Cr	Ni	Mo	Nb+Ta	Cu	Al	Ti	Fe
0.02	0.02	0.10	0.005	0.005	22.0	65.0	9.0	3.50	0.05	0.20	0.20	<0.3

TYPICAL PROPERTIES "AS WELDED"

tensile strength	750 N/mm2
0,2% proof stress	500 N/mm2
elongation on 4D.	38%
impact energy	at -196°C = 80J
PRE	50
hardness "as welded"	250 HV
hard drawn hardness	450 HV

Shielding gas: TIG: pure argon with back protection
MIG: pure argon or mixture Ar + 25-50% He

Complementary products:

Smaw Electrode:	Daiko 112	AWS A5.11	ENiCrMo-3
Flux Cored Wire:	Daiko FCW 625P	AWS A5.34	ENiCrMo3T1-4
Strip:	Daiko Strip 625	AWS A5.14	EQNiCrMo-3
SAW Flux:	Daikoflux 982 - 626W - 960W - 961W		
ESW Flux:	Daikoflux 940 - 944		

Packaging:

MIG	BS300	RANGE Ø 0,80 ÷ 1,60 mm	Kg 15-18
SAW	K415	RANGE Ø 2,00 ÷ 4,00 mm	Kg 25
ROD	CARTON BOX	RANGE Ø 1,20 ÷ 4,00 mm	Kg 5-10
TOURET	DIN760	RANGE Ø 1,00 ÷ 2,40 mm	Kg 150-250
DRUM		RANGE Ø 1,20 ÷ 1,60 mm	Kg 150-250

Other packaging available upon request.

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WELDING CONSUMABLES

PRODUCTS RANGE

DAIKO welding consumables

NICKEL ALLOYS

ALLOY	NAME	PROCESS	AWS
625	Daiko SF 625	Mig - Tig - Saw	A5.14 - ERNiCrMo-3
	Daiko 112	Smaw	A5.11 - ENiCrMo-3
	Daiko FCW 625P	FCAW	A5.34 - ENiCrMo3T1-4
	Daiko Strip 625	Strip	A5.14 - EQNiCrMo-3
	Daiko 625-W	Mig - Tig - Saw	A5.14 - ERNiCrMo-20
82	Daiko SF 82	Mig - Tig - Saw	A5.14 - ERNiCr-3
	Daiko 182	Smaw	A5.11 - ENiCrFe-3
	G-Tech 840 (SX/B)	Smaw	A5.11 - ENiCrFe-3
	Daiko FCW 82	FCAW	A5.34 - ENiCr3T0-4
	Daiko Strip 82	STRIP	A5.14 - EQNiCr-3
C276	Daiko SF 276	Mig - Tig - Saw	A5.14 - ERNiCrMo-4
	Daiko C276	Smaw	A5.11 - ENiCrMo-4
	Daiko FCW C276	FCAW	A5.34 - ENiCrMo4T0-4
	Daiko Strip C276	Strip	A5.14 - EQNiCrMo-4
Alloy C	Daiko 1002C	Smaw	A5.11 - ENiCrMo-5
	Daiko 1002Co	Smaw	A5.11 - (ENiCrMo-5)
C22	Daiko SF 622	Mig - Tig - Saw	A5.14 - ERNiCrMo-10
	Daiko 122	Smaw	A5.11 - ENiCrMo-10
59	Daiko SF 59	Mig - Tig - Saw	A5.14 - ERNiCrMo-13
	Daiko 59K	Smaw	A5.11 - ENiCrMo-13
	Daiko Strip 59	Strip	A5.14 - EQNiCrMo-13
686	Daiko 686	Mig - Tig - Saw	A5.14 - ERNiCrMo-14
	Daiko 686k	Smaw	A5.11 - ENiCrMo-14
	Daiko Strip 686	Strip	A5.14 - EQNiCrMo-14
825	Daiko SF 825	Mig - Tig	A5.14 - ERNiFeCr-1
	Daiko 135	Smaw	A5.4 - (E383-15)
	Daiko Strip 825	Strip	A5.14 - EQNiFeCr-1
Weld-A	Daiko Weld A	Smaw	A5.11 - ENiCrFe-2
617	Daiko SF 617	Mig - Tig - Saw	A5.14 - ERNiCrCoMo-1
	Daiko 117	Smaw	A5.11 - ENiCrCoMo-1
718	Daiko SF 718	Mig -Tig	A5.14 - ERNiFeCr-2
Pure Nickel	Daiko 208	Mig - Tig	A5.14 - ERNi-1
	Daiko 141	Smaw	A5.11 - ENi-1
	Daiko Strip 208	Strip	A5.14 - EQNi-1
Monel 400	Daiko SF 418	Mig - Tig - Saw	A5.14 - ERNiCu-7
	Daiko 190	Smaw	A5.11 - ENiCu-7
	Daiko Strip 418	Strip	A5.14 - EQNiCu-7
CuNi 70-30	Daiko 413	Mig - Tig - Saw	A5.7 - ERCuNi
	Daiko 187	Smaw	A5.6 - ECuNi
	Daiko Strip 413	Strip	A5.7 - EQCuNi
CuNi 90-10	Daiko 412	Mig - Tig - Saw	DIN 1733 - SG-CuNi10Fe
690	Daiko SF 652	Mig - Tig - Saw	A5.14 - ERNiCrFe-7
	Daiko 152	Smaw	A5.11 - ENiCrFe-7
	Daiko SF 652M	Mig - Tig - Saw	A5.14 - ERNiCrFe-7A
	Daiko Strip 652M	Strip	A5.14 - EQNiCrFe-7A
92	Daiko 92	Mig - Tig	A5.14 - ERNiCrFe-6
601	Daiko 601	Mig - Tig	A5.14 - ERNiCrFe-11
B2	Daiko B2	Tig	A5.14 - ERNiMo-7
	Daiko B2	Smaw	A5.11 - ENiMo-7
36 INV	Daiko 36 INV	Mig - Tig - Saw	NO AWS
657	Daiko 657	Mig - Tig	A5.14 - ERNiCr-4
	G-Tech 657	Smaw	A5.11 - ENiCr-4
657M	Daiko 657M	Mig - Tig	A5.14 - ERNiCr-7

DUPLEX • SUPERDUPLEX

ALLOY	NAME	PROCESS	AWS
2209	Daiko SF 2209	Mig - Tig - Saw	A5.9 - ER2209
	G-Tech 2209B	Smaw	A5.4 - E2209-15
	G-Tech 2209	Smaw	A5.4 - E2209-16
	G-Tech 2209R	Smaw	A5.4 - E2209-17
	Daiko MCW 2209	FCAW	A5.22 - EC2209
	Daiko FCW 2209P	FCAW	A5.22 - E2209T1-1/4
	Daiko FCW 2209	FCAW	A5.22 - E2209T0-1/4
	Daiko Strip 2209	Strip	A5.9 - EQ2209
2507	Daiko SF 2594	Mig - Tig - Saw	A5.9 - ER2594
	G-Tech 2594B	Smaw	A5.4 - E2594-15
	G-Tech 2594	Smaw	A5.4 - E2594-16
	Daiko FCW 2594P	FCAW	A5.22 - E2594T1-4
	Daiko FCW 2594	FCAW	A5.22 - E2594T0-4
	Daiko Strip 2594	Strip	A5.9 - EQ2594
Zeron 100®	Daiko SF 2594Cu	Mig - Tig - Saw	A5.9 - ER2594
	G-Tech 2595B	Smaw	A5.4 - E2595-15
	Daiko FCW 2595P	FCAW	A5.22 - E2594T1-4
2553	Daiko SF 2553	Mig - Tig - Saw	A5.9 - ER2553
	G-Tech 2553	Smaw	A5.4 - E2553-16
	Daiko FCW 2553	FCAW	A5.22 - (E2553T0-4)
	Daiko FCW 2553P	FCAW	A5.22 - (E2553T1-4)
	Daiko MCW 2553	FCAW	A5.22 - (EC2553)

SUPERAUSTENIC STEELS

ALLOY	NAME	PROCESS	AWS
Alloy 20	Daiko 320LR	Mig - Tig	A5.9 - ER320LR
	G-Tech 320LR	Smaw	A5.4 - E320LR-15
904L	Daiko 385	Mig - Tig - Saw	A5.9 - ER385
	G-Tech 385B	Smaw	A5.4 - E385-15
	G-Tech 385	Smaw	A5.4 - E385-16
	Daiko FCW 904L	FCAW	A5.22 - NO AWS
	Daiko FCW 904LP	FCAW	A5.22 - NO AWS
	Daiko MCW 385	FCAW	A5.22 - EC385
	Daiko Strip 385	FCAW	A5.9 - EQ385
310	Daiko SF 310	Mig - Tig - Saw	A5.9 - ER310
	Daiko SF 310Mn	Mig - Tig	A5.9 - (ER310)
	G-Tech 310	Smaw	A5.4 - E310-16
	G-Tech 310B	Smaw	A5.4 - E310-15
	G-Tech 310Mn	Smaw	EN ISO 3581-A - E 25 20 R 32
	G-tech 310MnMo	Smaw	No AWS
	Daiko FCW 310	FCAW	A5.22 - E310T0-1/4
	Daiko Strip 310LMo	Daiko Strip 310LMo	A5.9 - (EQ310)
310H	G-Tech 310H	Smaw	A5.4 - E310H-15

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WELDING CONSUMABLES

FERRITIC • MARTENSITIC STAINLESS STEELS

ALLOY	NAME	PROCESS	AWS
409Nb	Daiko SF 409Nb	Mig - Tig - Saw	A5.9 - ER409Nb
410	Daiko 410	Mig - Tig - Saw	A5.9 - ER410
	G-Tech 410B	Smaw	A5.4 - E410-15
	G-Tech 410HR	Smaw	A5.4 - E410-26
	G-Tech 410	Smaw	A5.4 - E410-16
	Daiko FCW 410	FCAW	AWS A5.22 - E410T1-1/4
410NiMo	Daiko SF 410NiMo	Mig - Tig - Saw	A5.9 - ER410
	G-Tech 410NiMoB	Smaw	A5.4 - E410NiMo-15
	G-Tech 410NiMo	Smaw	A5.4 - E410NiMo-16
	Daiko FCW 410NiMo	FCAW	A5.22 - E410NiMoT1-1/4
	Daiko MCW 410NiMo	FCAW	A5.22 - EC410NiMo
420	Daiko 420B	Mig-Tig-Saw	AWS A5.9 - ER420
	Daiko 420C	Mig-Tig-Saw	AWS A5.9 - (ER420)
430	Daiko SF 430	Mig - Tig - Saw	AWS A5.9 - ER430
	Daiko SF 430LNb	Mig - Tig - Saw	AWS A5.9 - (ER430)
	Daiko SF 430LNbTi	Mig-Tig	AWS A5.9 - (ER430)
	Daiko SF 430Ti	Mig-Tig	AWS A5.9 - (ER430)
	G-Tech 430	Smaw	AWS A5.4 - E430-16
	G-Tech 430B	Smaw	AWS A5.4 - E430-15
	Daiko MCW 430	FCAW	AWS A5.22 - NO AWS
	Daiko Strip 430	Strip	AWS A5.9 - EQ430
630 (17-4-PH)	Daiko 630	Mig - Tig - Saw	AWS A5.9 - ER630
	G-Tech 630	Smaw	AWS A5.4 - E630-16
	Daiko MCW 630	FCAW	AWS A5.22 - NO AWS
4122	Daiko 4122	Mig - Tig - Saw	AWS A5.9 - NO AWS
	G-Tech 4122	Smaw	AWS A5.4 - NO AWS

AUSTENITIC STAINLESS STEELS

ALLOY	NAME	PROCESS	AWS
308L	Daiko SF 308L	Mig - Tig - Saw	A5.9 - ER308L
	Daiko SF 308LSi	Mig - Tig	A5.9 - ER308LSi
	G-Tech 308LB	Smaw	A5.4 - E308L-15
	G-Tech 308L	Smaw	A5.4 - E308L-16
	G-Tech 308LR	Smaw	A5.4 - E308L-17
	Daiko FCW 308LP	FCAW	A5.22 - E308LT1-1/4
	Daiko FCW 308L	FCAW	A5.22 - E308LT0-1/4
	Daiko Strip 308L	Strip	A5.9 - EQ308L
308LCF	Daiko 308LCF	Tig - Saw	A5.9 - ER308L
	G-Tech 308LCF-15	Smaw	A5.4 - E308L-15
	G-Tech 308LCF-16	Smaw	A5.4 - E308L-16
	Daiko FCW 308LCF	FCAW	A5.22 - E308LT1-1/4J
308H	Daiko 308H	Mig - Tig - Saw	A5.9 - ER308H
	G-Tech 308HB	Smaw	A5.4 - E308H-15
	G-Tech 308H	Smaw	A5.4 - E308H-16
	Daiko FCW 308HP	FCAW	A5.22 - E308HT1-1/4
	Daiko FCW 308H	FCAW	A5.22 - E308HT0-1/4
316L	Daiko SF 316L	Tig - Saw	A5.9 - ER316L
	Daiko SF 316LSi	Mig - Tig	A5.9 - ER316LSi
	G-Tech 316LB	Smaw	A5.4 - E316L-15
	G-Tech 316L	Smaw	A5.4 - E316L-16
	G-Tech 316LR	Smaw	A5.4 - E316L-17
	Daiko FCW 316LP	FCAW	A5.22 - E316LT1-1/4
	Daiko FCW 316L	FCAW	A5.22 - E316LT0-1/4
	Daiko Strip 316L	Strip	A5.9 - EQ316L
316LCF	Daiko 316LCF	Tig - Saw	A5.9 - ER316L
	G-Tech 316LCF-15	Smaw	A5.4 - E316L-15
	G-Tech 316LCF-16	Smaw	A5.4 - E316L-16
	Daiko FCW 316LCF	FCAW	A5.22 - E316LT1-1/4
316NF	Daiko 316MnNF	Mig - Tig - Saw	A5.9 - ER316LMn
	G-Tech 316LMn-15	Smaw	A5.4 - (E316LMn-15)
	G-Tech 316LMn-16	Smaw	A5.4 - (E316LMn-16)
	Daiko FCW 316NF	FCAW	A5.22 - (E316LT0-4)

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DAIKO welding consumables

316H	Daiko 316H	Mig - Tig - Saw	A5.9 - ER316H
	G-Tech 316H	Smaw	A5.4 - E316H-16
16.8.2	Daiko 16.8.2	Tig - Saw	A5.9 - ER16.8.2
	G-Tech 16.8.2B	Smaw	A5.4 - E16.8.2-15
	G-Tech 16.8.2R	Smaw	A5.4 - E16.8.2-17
	Daiko FCW 16.8.2P	FCAW	A5.22 - (E16.8.2T1-1/4)
	Daiko FCW 16.8.2	FCAW	A5.22 - (E16.8.2T0-1/4)
317L	Daiko SF 317L	Mig - Tig - Saw	A5.9 - ER317L
	G-Tech 317L	Smaw	A5.4 - E317L-16
	Daiko FCW 317P	FCAW	A5.22 - E317LT1-1/4
	Daiko FCW 317	FCAW	A5.22 - E317LT0-1/4
	Daiko Strip 317L	Strip	A5.9 - EQ317L
318	Daiko 318	Mig - Tig - Saw	A5.9 - ER318
	Daiko 318Si	Mig - Tig - Saw	A5.9 - (ER318)
	G-Tech 318R	Smaw	A5.4 - E318-17
	Daiko FCW 318P	FCAW	A5.22 NO AWS
347	Daiko SF 347	Mig - Tig - Saw	A5.9 - ER347
	Daiko SF 347Si	Mig - Tig	A5.9 - ER347Si
	G-Tech 347B	Smaw	A5.4 - E347-15
	G-Tech 347	Smaw	A5.4 - E347-16
	Daiko FCW 347	FCAW	A5.22 - E347T0-1/4
	Daiko Strip 347	Strip	A5.9 - EQ347
347H	Daiko SF 347H	Tig - Saw	A5.9 - ER347
	G-Tech 347HB	Smaw	A5.4 - E347-15
	G-Tech 347H	Smaw	A5.4 - E347-16
	Daiko FCW 347HP	FCAW	A5.22 - E347T1-1/4
309L	Daiko SF 309L	Mig - Tig - Saw	A5.9 - ER309L
	Daiko SF 309LSi	Mig - Tig	A5.9 - ER309LSi
	G-Tech 309LB	Smaw	A5.4 - E309L-15
	G-Tech 309L	Smaw	A5.4 - E309L-16
	G-Tech 309LR	Smaw	A5.4 - E309L-17
	Daiko FCW 309LP	FCAW	A5.22 - E309LT1-1/4
	Daiko FCW 309L	FCAW	A5.22 - E309LT0-1/4
	Daiko Strip 309L	Strip	A5.9 - EQ309L
309LMo	Daiko SF 309LMo	Mig - Tig - Saw	A5.9 - (ER309LMo)
	G-Tech 309LMoB	Smaw	A5.4 - E309LMo-15
	G-Tech 309LMoR	Smaw	A5.4 - E309LMo-17
	Daiko FCW 309LMoP	FCAW	A5.22 - E309LMoT1-1/4
	Daiko FCW 309LMo	FCAW	A5.22 - E309LMoT0-1/4
	Daiko Strip 309LMo	Strip	A5.9 - (EQ309LMo)
309LNb	G-Tech 309Nb	Smaw	A5.4 - E309Cb-16
	Daiko Strip 309LNb	Strip	A5.9 - EQ309LNb
307	Daiko 307	Tig - Saw	A5.9 - ER307
	Daiko 307Si	Mig - Tig	A5.9 - ER307Si
	G-Tech 307B	Smaw	A5.4 - E307-15
	G-Tech 307	Smaw	A5.4 - E307-17
	Daiko FCW 307	FCAW	A5.22 - (E307T0-1/4)
312	Daiko SF 312	Mig - Tig - Saw	A5.9 - ER312
	G-Tech 312R	Smaw	A5.4 - E312-17
	G-Tech 312	Smaw	AWS A5.4 E312-16
	Daiko FCW 312	FCAW	A5.22 - E312T0-4

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WELDING CONSUMABLES

CREEP RESISTING STEELS

ALLOY	NAME	PROCESS	AWS
0.5Mo	Daiko Mo.B	Mig - Tig	A5.28 - ER70S-A1
	Daiko Saw Mo.B	Saw	A5.23 - EA2
	G-Tech Mo.B	Smaw	A5.5 - E7018-A1
	Daiko FCW Mo.B	FCAW	A5.29 - E81T5-A1
	Daiko MCW Mo.B	FCAW	A5.28 - E80C-G
1¼Cr ½Mo	Daiko 1CrMo	Mig - Tig	A5.28 - ER80S-B2
	Daiko 1CrMoS	Mig - Tig	A5.28 - ER80S-G
	Daiko Saw 1CrMo	Saw	A5.23 - EB2
	G-Tech 1CrMo	Smaw	A5.5 - E8018-B2
	G-Tech 1CrMoL	Smaw	A5.5 - E7015-B2L
	Daiko FCW 1CrMoB	FCAW	A5.29 - E81T5-B2
	Daiko FCW 1CrMoR	FCAW	A5.29 - E81T1-B2
	Daiko MCW 1CrMo	FCAW	AWS A5.28 - E80C-B2
CrMoV	G-Tech 1CrMoV	Smaw	A5.5 - E9018-G
	Daiko FCW 1CrMoV	FCAW	A5.36 - E91T1-C1(M21)PZ-G
2¼Cr 1Mo	Daiko 2CrMo	Mig - Tig	A5.28 - ER90S-B3
	Daiko 2CrMoS	Mig - Tig	A5.28 - ER90S-G
	Daiko Saw 2CrMo	Saw	A5.23 - EB3
	G-Tech 2CrMo	Smaw	A5.5 - E9018-B3
	G-Tech 2CrMoL	Smaw	A5.5 - E8015-B3L
	Daiko FCW 2CrMo	FCAW	A5.29 - E91T5-B3
	Daiko FCW 2CrMoR	FCAW	A5.29 - E91T1-B3
	Daiko MCW 2CrMo	FCAW	AWS A5.28 - E90C-B3
5CrMo	Daiko 5CrMo	Mig - Tig	A5.28 - ER80S-B6
	Daiko Saw 5CrMo	Saw	A5.23 - EB6
	G-Tech 5CrMo	SMAW	A5.5 - E8015-B6 / E8016-B6
	Daiko FCW 5CrMo	FCAW	A5.29 - E81T1-B6 / B8
9CrMo	Daiko 9CrMo	Mig - Tig	A5.28 - ER80S-B8
	Daiko Saw 9CrMo	Saw	A5.23 - EB8
	G-Tech 9CrMo	Smaw	A5.5 - E8015-B8
	Daiko FCW 9CrMo	FCAW	A5.29 - E81T1-B8
9CrMoV	Daiko 9CrMoV	Tig	A5.28 - ER90S-B9
	Daiko Saw 9CrMoV	Saw	A5.23 - EB9
	G-Tech 9CrMoV	Smaw	A5.5 - E9015-B9
	Daiko FCW 9CrMoV	FCAW	A5.29 - E91T1-B9
	Daiko MCW 9CrMoV	FCAW	A5.28 - E90C-B9
10CrMoW	G-Tech 10CrMoW	Smaw	A5.5 - No AWS
	Daiko FCW 10CrMoW	FCAW	A5.29 - No AWS
9CrWV	Daiko 9CrWV	Tig	A5.28 - ER90S-G
	Daiko Saw 9CrWV	Saw	A5.23 - EG
	G-Tech 9CrWV	Smaw	A5.5 - E9015-G
	Daiko FCW 9CrWV	FCAW	A5.29 - E91T1-G
12CrMoV	Daiko 12CrMoV	Tig	A5.28 - No AWS
	G-Tech 12CrMoV	Smaw	A5.5 - No AWS

HIGH TEMPERATURE ALLOYS

ALLOY	NAME	PROCESS	AWS
253MA	Daiko 22.12.HT	Mig - Tig - Saw	NO AWS
	G-Tech 253MA	Smaw	NO AWS
254 SMO®	G-Tech 20.18.6CuR	Smaw	NO AWS
800 / 800H	Daiko 21.33MnNb	Mig - Tig - Saw	NO AWS
	G-Tech 800Nb	Smaw	NO AWS
18-37 (HT-HU)	G-Tech 330H	Smaw	AWS A5.4 - (E330-15)
4830	G-Tech 25.24Nb	Smaw	NO AWS
HP10Cb	Daiko 25.35Nb	Mig - Tig - Saw	NO AWS
	G-Tech 25.35Nb	Smaw	NO AWS
HP40Nb	Daiko 25.35.4CNb	Mig - Tig - Saw	NO AWS
	G-Tech 25.35.4CNb	Smaw	NO AWS
35.45	Daiko 35.45Nb	Tig	NO AWS
	G-Tech 35.45Nb	Smaw	NO AWS
22H	G-Tech 50WCo	Smaw	NO AWS
	G-Tech 26.50.4W	Smaw	NO AWS

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CRYOGENIC STEELS

DAIKO welding consumables

ALLOY	NAME	PROCESS	AWS
1Ni	Daiko 1Ni	Mig - Tig	AWS A5.28 - ER80S-Ni1
	Daiko 1Ni	Saw	AWS A5.23 - ENi1
	G-Tech 1Ni	Smaw	AWS A5.5 - E8018-C3
	Daiko FCW 1NiB	FCAW	AWS A5.29 - E81T5-Ni1
	Daiko FCW 1Ni	FCAW	AWS A5.36 - AWS A5.36 E81T1-M21A8-Ni1-H4
	Daiko MCW 1Ni	FCAW	AWS A5.36 - E80T15-M21A8-Ni1-H4
2Ni	Daiko 2Ni	Mig - Tig	AWS A5.28 - ER80S-Ni2
	Daiko 2Ni	Saw	AWS A5.23 - ENi2
	G-Tech 2Ni	Smaw	AWS A5.5 - E8018-C1
	Daiko FCW 2NiB	FCAW	AWS A5.29 - E81T5-Ni2
	Daiko FCW 2Ni	FCAW	AWS A5.29 - E81T5-Ni2
3Ni	Daiko 3Ni	Mig - Tig	AWS A5.28 - ER80S-Ni3
	Daiko 3Ni	Saw	AWS A5.23 - ENi3
	G-Tech 3Ni	Smaw	AWS A5.5 - E8018-C2

HIGH STRENGTH STEELS

ALLOY	NAME	PROCESS	AWS
80-90ksi	Daiko D2	Mig - Tig	A5.28 - ER80S-D2
	Daiko SAW MnMo	Saw	A5.23 - EA3
	G-Tech 90G	Smaw	A5.5 - E9018-G
100ksi	Daiko NiMo	Mig - Tig	A5.28 - ER100S-G
	Daiko Saw S3NiMo	Saw	A5.23 - EF3
	G-Tech 109	Smaw	E10018-G
110ksi	Daiko 96	Mig - Tig	A5.28 - ER110S-G
	Daiko 700	SAW	A5.23 - EG
	G-Tech 96	SMAW	A5.5 - E11018-M
	Daiko FCW 115R	FCAW	A5.36 - E111T1
	Daiko FCW 115B	FCAW	A5.36 - E110T5
	Daiko MCW 115	FCAW	A5.36 - E110T15
	Daiko FCW 97	FCAW	A5.29 - E111T1-K3MJ
120ksi	Daiko 120	Mig - Tig	A5.28 - ER120S-G
	Daiko 900	SAW	A5.23 - EG
	G-Tech 120	SMAW	A5.5 - E12018-G
	Daiko FCW 120B	FCAW	A5.36 - E120T5
	Daiko MCW 120	FCAW	A5.36 - E120T15
130ksi	Daiko 4130	Mig - Tig - Saw	NO AWS

ALLUMINIUM ALLOYS

ALLOY	NAME	PROCESS	AWS
Al	Daiko Al 99,5Ti	Mig - Tig	En18273 - S Al 1450
	Daiko Al 99,7	Mig - Tig	A5.10 - ER1070
	Daiko Al 99,8	Mig - Tig	A5.10 - ER1080
	G-Tech 99,8	SMAW	DIN 1732 - EL-Al 99,8
	Daiko Al 99Cu	Mig - Tig	A5.10 - ER1100
AlSi	Daiko AlSi5	Mig - Tig	A5.10 - ER4043
	G-Tech 605	SMAW	A5.3 - E4043
	Daiko AlSi12	Mig - Tig	A5.10 - ER4047
	G-Tech 601	SMAW	DIN 1732 - EL-AlSi 12
AlMg	Daiko AlMg3	Mig - Tig	A5.10 - ER5754
	Daiko AlMg5	Mig - Tig	A5.10 - ER5356
AlMgMn	Daiko AlMg4,5Mn	Mig - Tig	A5.10 - ER5183
AlMn	G-Tech AlMn	Smaw	DIN 1732 - EL-AlMn 1

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WELDING CONSUMABLES

CARBON STEEL

ALLOY	NAME	PROCESS	AWS
Wire	Daiko SG1	Mig-Tig	A5.18 - ER70S-3
	Daiko SG2	Mig-Tig	A5.18 - ER70S-6
	Daiko SG3	Mig-Tig	A5.18 - ER70S-6
	Daiko 107Ti	Mig	A5.18 - ER70S-G
FCW	Daiko FCW 107Ti	FCAW	--
	Daiko FCW 102R	FCAW	A5.36 - E71T1
	Daiko FCW 107B	FCAW	A5.36 - E70T5
	Daiko MCW 107	FCAW	A5.36 - E70C6M
	Daiko FCW 107OP	FCAW	A5.36 - E71TGS
SMAW	G-Tech 101C	SMAW	A5.1 - E6010
	G-Tech 102C	SMAW	A5.1 - E7010-G
	G-Tech 101	SMAW	A5.1 - E6013
	G-Tech 102	SMAW	A5.1 - E6013
	G-Tech 103	SMAW	A5.1 - E6013
	G-Tech 102HR	SMAW	A5.1 - E7024
	G-Tech 107	SMAW	A5.1 - E7016
	G-Tech 107B	SMAW	A5.1 - E7018.1
	G-Tech 108	SMAW	A5.1 - E7018
	G-Tech 107HR	SMAW	A5.1 - E7028
SAW	Daiko S2	SAW	A5.23 - EM12k
	Daiko S2Si	SAW	A5.23 - EM12k
	Daiko S3Si	SAW	A5.23 - EH12k
	Daiko S4	SAW	A5.23 - EH14
CORTEN	Daiko 66	Mig Tig	A5.28 - ER80S-G
	G-Tech 57B	SMAW	A5.5 - E8018-W2
	Daiko FCW 66R	FCAW	A5.36 - E81T1
	Daiko FCW 66B	FCAW	A5.36 - E80T5
	Daiko MCW 66	FCAW	A5.36 - E80T15
	Daiko SAW 66	SAW	A5.23 - EG

CAST IRON

ALLOY	NAME	PROCESS	AWS
Ni CI	Daiko 99	Mig - Tig	AWS A5.15 - ERNi-CI
	G-Tech 99	Smaw	AWS A5.15 - ENi-CI
	Daiko 324	Mig - Tig	AWS A5.14 - ERNI-1
	G-Tech 324	Smaw	AWS A5.15 - ENi-CI
NiFe-CI	Daiko 55	Mig - Tig	AWS A5.15 - ERNiFe-CI
	G-Tech 55	Smaw	AWS A5.15 - ENiFe-CI
	G-Tech 323	Smaw	AWS A5.15 - ENiFe-CI
	G-Tech 323S	Smaw	AWS A5.15 - ENiFe-CI
	Daiko FCW 55	FCAW	AWS A5.15 - NO AWS
	Daiko FCW 321	FCAW	AWS A5.15 - NO AWS
	Daiko FCW 345	FCAW	AWS A5.15 - NO AWS
	Daiko FCW 323S	FCAW	AWS A5.15 - NO AWS
NiFe-Cu	G-Tech 330Cu	Smaw	AWS A5.15 - (E NiCu - B)
	G-tech 306Cu	Smaw	AWS A5.15 - (E NiFe - CI)
Bimetal	G-Tech 305	Smaw	AWS A5.15 - ENiFe-CI
Fe-V	G-tech 301V	Smaw	AWS A5.15 - E S t

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COPPER ALLOYS

DAIKO welding consumables

ALLOY	NAME	PROCESS	AWS
Cu	Daiko CuSn	Mig - Tig	A5.7 - ERCu
	G-Tech CuSn	Smaw	A5.6 - ECu
CuSi	Daiko CuSi3	Mig - Tig	A5.7 - ERCuSi-A
CuAg	Daiko CuAg	Mig - Tig	DIN 1733 - SG-CuAg
CuSn	Daiko CuSn6	Mig - Tig	A5.7 - ERCuSn-A
	G-Tech CuSn7	Smaw	A5.6 - ECuSn-C
	Daiko CuSn8	Mig - Tig	A5.7 - ERCuSn-C
	Daiko CuSn10	Mig - Tig	A5.7 - NO AWS
	Daiko CuSn12	Mig - Tig	A5.7 - NO AWS
CuAl	Daiko CuAl8	Mig - Tig - Saw	A5.7 - ERCuAl-A1
	G-Tech 401	Smaw	A5.6 - ECuAl-8
	Daiko CuAl9Fe	Mig - Tig - Saw	A5.7 - ERCuAl-A2
	G-Tech 405	Smaw	A5.6 - ECuAl-A2
CuAlNi	Daiko CuAl8Ni2	Mig - Tig	DIN 1733 - SG-CuAl8Ni2
	Daiko CuAl8Ni6	Mig - Tig	A5.7 - ERCuNiAl
CuMnAl	Daiko CuMn13Al	Mig - Tig	A5.7 - ERCuMnNiAl
	G-Tech 403	Smaw	A5.6 - ECuMnNiAl
CuNi 70-30	Daiko 413	Mig - Tig - Saw	A5.7 - ERCuNi
	Daiko 187	Smaw	A5.6 - ECuNi
	Daiko Strip 413	Strip	A5.7 - EQCuNi
CuNi 90-10	Daiko 412	Mig - Tig - Saw	DIN 1733 - SG-CuNi10Fe

COBALT ALLOYS

ALLOY	NAME	PROCESS	AWS
Gr. 6	Daiko 1006LC	FCAW	A5.21 - ERCCoCr-A
	Daiko 1006	FCAW	A5.21 - ERCCoCr-A
	Daiko 1006	Tig	A5.21 - ERCoCr-A
	G-Tech 1006	Smaw	A5.13 - ECoCr-A
Gr. 12	Daiko 1008	FCAW	A5.21 - ERCCoCr-B
	Daiko 1008	Tig	A5.21 - ERCoCr-B
	G-Tech 1008	Smaw	A5.13 - ECoCr-B
Gr. 1	Daiko 1010	FCAW	A5.21 - ERCCoCr-C
	Daiko 1010	Tig	A5.21 - ERCoCr-C
	G-Tech 1010	Smaw	A5.13 - ECoCr-C
Gr. 21	Daiko 1021	FCAW	A5.21 - ERCCoCr-E
	Daiko 1021	Tig	A5.21 - ERCoCr-E
	G-Tech 1021	Smaw	A5.13 - ECoCr-E
Gr. 25	Daiko 1025	Tig	EN14700 - T Z Co (L 605)
	G-Tech 1025	Smaw	EN14700 - E Z Co1 (L 605)
Gr. 50	Daiko 1050	FCAW	A5.21 - ERNiCr-B (UMCO 50)

Other grades upon request

TITANIUM ALLOYS

ALLOY	NAME	PROCESS	AWS
Gr. 1	Daiko Ti Gr. 1	Mig - Tig	A5.16 - ERTi-1
Gr. 2	Daiko Ti Gr. 2	Mig - Tig	A5.16 - ERTi-2
Gr. 5	Daiko Ti Gr. 5	Mig - Tig	A5.16 - ERTi-5
Gr. 7	Daiko Ti Gr. 7	Mig - Tig	A5.16 - ERTi-7
Gr. 12	Daiko Ti Gr. 12	Mig - Tig	A5.16 - ERTi-12

Telephone: 01782 566553 Fax: 01782 566123

WELDING CONSUMABLES

FLUX

A COMPLETE ASSORTMENT OF SAW/ESW FLUXES SUITABLE FOR EVERY KIND OF ALLOYS

	NAME	PROCESS	BASICITY	DESCRIPTION
C Steel	DAIKOFLUX 470-W	SAW	0,5	RUTILE FLUX FOR CARBON STEEL AND LOW ALLOY STEELS
	DAIKOFLUX 480-W	SAW	1,5	SEMI-BASIC FLUX FOR CARBON STEEL AND LOW ALLOY STEELS FOR GENERAL APPLICATION WITH EXCELLENT WELDING PERFORMANCE
	DAIKOFLUX 481-WP	SAW	1,4	SEMI-BASIC FLUX SPECIFIC FOR WELDING HIGH QUALITY STEEL PIPES FOR OIL&GAS INDUSTRIES
	DAIKOFLUX 490-W	SAW	3,1	BASIC FLUX FOR CARBON STEEL AND LOW ALLOY STEELS SUITABLE TO JOIN STRUCTURAL STEELS WITH HIGH RESISTANCE
	DAIKOFLUX 491-W	SAW	3	BASIC FLUX FOR CARBON STEEL AND LOW ALLOY STEELS FOR CRITICAL APPLICATIONS OF THICK SECTION MATERIALS WHEN THERE IS DEMAND ON HIGH IMPACT TOUGHNESS VALUES AT VERY LOW TEMP (-60° C)
	DAIKOFLUX 491MW	SAW	3	MODIFIED VERSION OF 491-W SUITABLE FOR MULTI WIRE APPLICATIONS
Low alloy and Martensitic steels	DAIKOFLUX 493-W	SAW	3,1	HIGH BASIC FLUX FOR LOW ALLOYS AND MARTENSITIC CrMo(Ni) STEELS
Stainless Steels	DAIKOFLUX 303	SAW	1.6	SEMI-BASIC FLUX FOR WELD/CLAD STAINLESS AND HEAT RESISTANT STEELS
	DAIKOFLUX 693	SAW	1,8	SEMI-BASIC FLUX FOR WELD/CLAD STAINLESS STEELS
	DAIKOFLUX 900-W	SAW	1,9	SEMI-BASIC FLUX FOR WELD/CLAD AUSTENITIC AND DUPLEX/SUPERDUPLEX STEELS
Ni Alloy	DAIKOFLUX 982	SAW	1,3	SEMI-BASIC PREFUSED FLUX FOR Cr-Mo STEELS, STAINLESS STEELS AND NICKEL BASE ALLOYS
	DAIKOFLUX 626-W	SAW	2,7	FLUORIDE-BASIC FLUX FOR WELD/CLAD STAINLESS STEELS AND NICKEL ALLOYS
	DAIKOFLUX 960-W	SAW	3,5	BASIC FLUX FOR HEAVY THICKNESS WELDING/CLADDING NICKEL ALLOYS
	DAIKOFLUX 961-W	SAW	2	BASIC FLUX FOR WELDING/CLADDING NICKEL BASE ALLOYS
Strip cladding	DAIKOFLUX 930	ESW	4,6	HIGH BASIC FLUX FOR STAINLESS STEEL STRIP CLADDING
	DAIKOFLUX 937AS	SAW	1,2	FLUX FOR STAINLESS STEEL STRIP CLADDING WITH SAW PROCESS
	DAIKOFLUX 940	ESW	4	BASIC FLUX FOR HIGH SPEED CLADDING WITH NICKEL BASE STRIPS
	DAIKOFLUX 942AS	SAW	2,3	BASIC FLUX FOR SUBARC STRIP CLADDING WITH NICKEL BASE STRIPS
	DAIKOFLUX 944	ESW	4,6	HIGH BASIC FLUX FOR NICKEL BASE STRIP CLADDING
	DAIKOFLUX 944-SL	ESW	4,6	HIGH BASIC FLUX FOR SINGLE LAYER NICKEL BASE STRIP CLADDING

E-mail: sales@weldfastuk·co·uk Web: www·weldfastuk·co·uk

GAS WELDING/ BRAZING RODS

Copper Coated Mild Steel Gas Welding Rods

AWS A5.2 R45 BS 1453 A1

Copper coated mild steel rod that is suitable for welding mild steel.

Part No.	Diameter	Weight
WER1700	1.6 mm	5 Kg
WER1701	2.4 mm	5 Kg
WER1702	3.2 mm	5 Kg

Chemical Analysis (WT%)

C	Si	Mn
0.07	0.10	0.40

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene

Brazing Rods Cu59ZnSnMn

AWS A5.8.04 EN 1044

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene

Chemical Analysis (WT%)

Cu	Si	Sn	Zn
59	0.3	0.4	Bal

Silicon Bronze C2 Brazing Rods - Cu59 ZnSnMn

General purpose brazing rod used for brazing of steel, copper alloys, cast iron, nickel alloys & stainless steel.

Part No.	Diameter	Weight
WER1710	1.6 mm	2.5 Kg
WER1711	2.4 mm	2.5 Kg
WER1712	3.2 mm	2.5 Kg
WER1713	4.8 mm	2.5 Kg

Flux Coated Bronze brazing rod C2FC Cu59 ZnSnMnFC

- for continuous brazing of mild steel, galvanised steel & dissmilar joints.

Part No.	Diameter	Weight
WER1721	2.4 mm	2.5 Kg
WER1722	3.2 mm	2.5 Kg

Flux impregnated silicon bronze brazing rod CuZnSnMn- IMP is ideal for brazing clean mild steel.

Part No.	Diameter	Weight
WER1731	2.4 mm	2.5 Kg
WER1732	3.2 mm	2.5 Kg

Brazing Flux Powder 500g
(Brazing of Steel)
Part No. CHEM0001

Telephone: 01782 566553 Fax: 01782 566123

SILVER SOLDER RODS

Silver Solder can be used to join most common engineering metals - copper, copper alloys including brass, bronze, gun metal, nickel silver, aluminium bronze, copper nickel. Steels including mild, carbon, tool steel, stainless steel, & low alloy steel.

40% Silver Solder Rods - Cadmium Free

Ag40Sn is a low melting, cadmium free, silver brazing alloy with good flow characteristics.

ISO 17672 Ag140 AWS A5.8-04 Bag-28
EN1044 AG105 DIN8513 L-Ag40Sn

Part No.	Diameter	Weight
WER2251	1.5 mm	Per Rod
WER2255	2.0 mm	Per Rod
WER2250	1.5 mm	1 Kg
WER2254	2.0 mm	1 Kg

Chemical Analysis (WT%)

Ag	Cu	Zn	Sn
40	30	28	2

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene
Melting Range:	650 - 710°C

55% Silver Solder Rods - Cadmium Free

Ag55Sn is a low melting, cadmium free, silver brazing alloy with excellent flow properties. Due to its low melting point it is particularly suited to braze stainless steel; however if the stainless steel joint will be exposed to water/ moisture, it is adviced to use zinc free or nickel-bearing alloys in order to avoid problems of interfacial corrosion.

ISO 17672 Ag155 AWS A5.8-04 --
EN1044 AG103 DIN8513 L-Ag55Sn

Part No.	Diameter	Weight
WER2253	1.5 mm	Per Rod
WER2257	2.0 mm	Per Rod
WER2252	1.5 mm	1 Kg
WER2256	2.0 mm	1 Kg

Chemical Analysis (WT%)

Ag	Cu	Zn	Sn
55	21	22	2

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene
Melting Range:	630 - 660°C

40% Flux Coated Silver Solder Rods - Cadmium Free

Ag40Sn is a low melting flux coated, cadmium free, silver brazing alloy with good flow characteristics.

ISO 17672 Ag140 AWS A5.8-04 Bag-28
EN1044 AG105 DIN8513 L-Ag40Sn

Part No.	Diameter	Weight
WER2248	1.5 mm	Per Rod
WER2249	2.0 mm	Per Rod
WER2246	1.5 mm	1 Kg
WER2247	2.0 mm	1 Kg

Chemical Analysis (WT%)

Ag	Cu	Zn	Sn
40	30	28	2

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene
Melting Range:	650 - 710°C

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SILVER BRAZING RODS & SOLDER

CP2 Silver Brazing Alloy

Ag2CuP is a silver-copper-phosphorous brazing alloy, with very good flow characteristics.
It can be used to join copper to copper or copper based base materials (e.g. Bronze/ Brass).
The phosphorus contained in the alloy acts as a flux agent, so that it's not necessary to use an additional flux when brazing copper to copper; however when joining copper based materials (e.g bronze/ copper) a proper flux should be used.

AgCuP should not be used on ferrous or nickel alloys, or alloys containing more than 10% of nickel, due to the formation of brittle intermetallic compounds which will cause failure of the joint.

ISO 17672 CuP279
EN1044 CP105
AWS A5.8-04 BCuP-6
DIN8513 L-Ag2P

Part No.	Diameter	Weight
WER2240	1.5 mm	1 Kg
WER2241	2.0 mm	1 Kg
WER2242	3.0 mm	1 Kg

Chemical Analysis (WT%)

Ag	Cu	P
2	95.1	6.5

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene
Melting Range:	650 - 810°C

CP4 Silver Brazing Alloy

Ag5CuP is a silver-copper-phosphorous brazing alloy, with very good flow characteristics. It can be used to join copper to copper or copper based base materials (e.g. Bronze/ Brass). The phosphorus contained in the alloy acts as a flux agent, so that it's not necessary to use an additional flux when brazing copper to copper; however when joining copper based materials (e.g bronze/ copper) a proper flux should be used.
Good service performance are obtained on joints subject to vibrations.

AgCuP should not be used on ferrous or nickel alloys, or alloys containing more than 10% of nickel, due to the formation of brittle intermetallic compounds which will cause failure of the joint.

EN1044 CP104
AWS A5.8-04 BCuP-3
DIN8513 L-Ag5P

Part No.	Diameter	Weight
WER2243	1.5 mm	1 Kg
WER2244	2.0 mm	1 Kg
WER2245	3.0 mm	1 Kg

Chemical Analysis (WT%)

Ag	Cu	P
5	89	6

Welding Process:	Gas Welding
Gas:	Oxygen/ Acetylene
Melting Range:	645 - 815°C

Lead Free Solder Wire (Sn40Pb60)

High purity alloy that is composed of 40% Tin and 60% Lead from virgin metals.
Applied by hand or feed soldering process in electronic and electrical assemblies.
Conforms to JIS, ANSI, IPC, DIN, ISO standards.

Part No.	Diameter	Weight
WER2237	0.8 mm	0.5 Kg
WER2238	1.2 mm	0.5 Kg
WER2235	1.6 mm	0.5 Kg
WER2236	3.2 mm	0.5 Kg

Telephone: 01782 566553 Fax: 01782 566123

FLUXES & BACKING TAPE

Brazing Flux Powder 500g
(Brazing of Steel)
Part No. CHEM0001

Aluminium Brazing
Flux Powder 500g
(Aluminium Brazing)
Part No. CHEM0005

Aluminium Welding
Flux Powder 500g
(Aluminium Gas Welding)
Part No. CHEM0006

Silver Solder Flux Powder
(Silver Brazing)
250g- CHEM0010
500g- CHEM0011

Stainless Steel
Flux Powder 250g
(Stainless Steel Brazing)
Part No. CHEM0015

High Temperature Weld Backing Tape

The use of this backing tape is a good and cost effective substitute for traditional back purging methods. The high temperature weld backing tape reduces weld oxidation and provides support to the back of the weld, which allows smoother and flatter welds. The woven fiberglass and flexible aluminium tape can be easily and quickly manipulated into a number of shapes and sizes. This product is suitable for Stick,Tig & Mig welding applications.

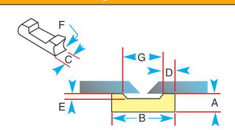
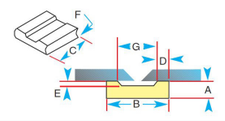
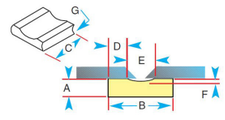
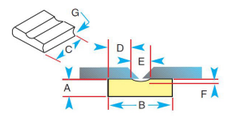
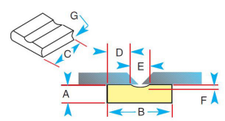
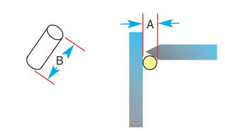
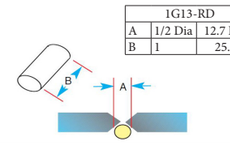
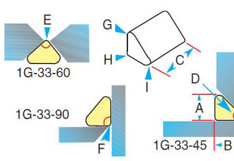
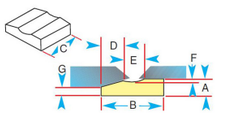
Part No.	Description	Working Temperature
WER2416	29mm x 120mm x 10 MTR High Temperature Backing Tape	550°C
WER2417	38mm x 130mm x 10 MTR High Temperature Backing Tape	550°C

E-mail: sales@weldfastuk.co.uk Web: www.weldfastuk.co.uk

GULLCO

CERAMIC WELD BACKING TAPE

KATBAK® Ceramic Weld Backing improves Weld Quality, saves time and reduces cost.

Model	Specifivation / Typical Application	Specs inches / (mm)
1G93-R-1/4 (12mtr- 40ft/ box) √	Similar to the 1G93-R tile but in 1/4" lengths making it much more flexible to wrap around smaller diameters of pipe and vessel.	 A 1/4 6.3; B 7/8-1 22.2-25.4; C 1/4 6.3; D 5/32 4; E 1/16 1.6; F 3/16 r 4.8 r; G 7/16 11.1
1G93-R (12mtr- 40ft/ box) √	This tile is most suitable for those applications where slag is involved, mainly MAG welding with cored wire. It gives space for the slag to go while leaving a good root bead. Each tile is radiused to form a strip around the cylinder.	 A 1/4 6.3; B 7/8-1 22.2-25.4; C 1 25.4; D 5/32 4; E 1/16 1.6; F 3/16 r 4.8 r; G 7/16 11.1
1G42-R (12mtr- 40ft/ box) √	This tile is useful for MIG welding with solid wires and metal cored wires. It is also useful for TIG welding. Cored wires can also be used with this tile but smaller root reinforcement will be produced. Each tile is radiused to form the strip around a cylinder.	 A 1/4 6.3; B 1 25.4; C 1 25.4; D 9/32 7.2; E 7/16 11.1; F 1/16 1.6; G 3/16 r 4.8 r
1G43-R (12mtr- 40ft/ box) √	This tile is for similar applications as the 1G42-R but where a narrower root bead is required. Each tile is radiused to form a strip around a cylinder.	 A 1/4 6.3; B 1 25.4; C 1 25.4; D 3/8 9.5; E 1/4 6.3; F 1/16 1.6; G 3/16 r 4.8 r
1G82-R (9mtr- 30ft/ box) √	This tile is similar to the 1G42-R but it is thicker and more robust for heavier weld deposits and highier amperages. Each tile is radiused to form a strip around a cylinder.	 A 5/16 7.9; B 1 1/4 31.7; C 1 25.4; D 13/32 10.3; E 7/16 11.1; F 1/16 1.6; G 3/16 r 4.8 r
1G6-RD (12mtr- 40ft/ box) **1G9-RD** (12mtr- 40ft/ box)	This is a 6mm round tile suitable for X preps, K perps and single bevel, single v butt joints (similar to fillet welds) on thin plates up to 10mm thick. Suitable for welding with MIG/MAG solid, flux cored or metal cored wires. 1G9-RD is for use on thicker plates.	 1G6-RD: A 1/4 Dia 6.3 Dia; B 1 25.4. 1G9-RD: A 3/8 Dia 9.5 Dia; B 1 25.4
1G13-RD **1G15-RD** **1G20-RD** (12mtr- 40ft/ box)	These tiles are for similar uses as the 1G6-RD but for thicker plates up to 15mm thick. Suitable for welding with MIG/MAG solid, flux cored or metal cored wires. Can be used as shown.	 1G13-RD: A 1/2 Dia 12.7 Dia; B 1 25.4. 1G15-RD: A 5/8 Dia 15.9 Dia; B 1 25.4. 1G20-RD: A 7/8 Dia 22.2 Dia; B 1 25.4
1G33-45 (12mtr- 40ft/ box) **1G33-60** (12mtr- 40ft/ box) **1G33-90** (12mtr- 40ft/ box)	All 1G33 tiles are suitable for K or X preps where the bevel angles are 45°, 60° or 90°. Also suitable for welding with MIG/MAG solid wire, metal or flux cored wires. They are a substitute for round tiles where the benefit of the 1G33 range of tiles is a 'full-face' contact with the joint preparation, reducing the risk of burn-through as may occur with the round tiles where you have a single point contact of the tile with the work piece. 1G33-90 is also used when reverse side of a single bevel, single V butt joint where the reverse andgle will always be 90º.	 1G-33-60, 1G-33-90, 1G-33-45 A 9/16 14.3; B 5/8 15.9; C 1 25.4; D 40º 40º; E 55º 50º; F 85º 85º; G 1/8 r 3.2 r; H 7/64 r 2.8 r; I 3/32 r 2.4 r
1G62 (9mtr- 30ft/ box)	This tile is used when two plates to be welded are of a different thicnkness and is suitable for MIG welding with solid wire, metal cored and flux cored wire.	 A 21/64 8.3; B 1 7/32 31; C 1 25.4; D 7/16 11.1; E 7/16 11.1; F 3/64 1.2; G 11/64 4.4

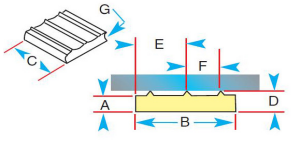
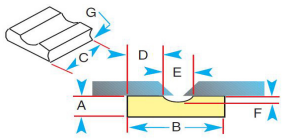
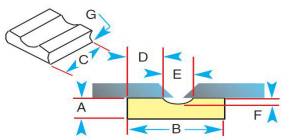
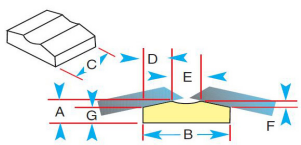
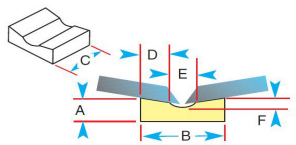
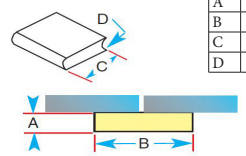
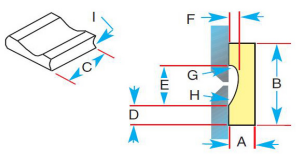
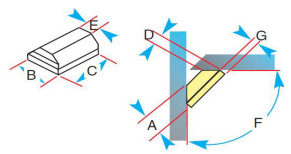
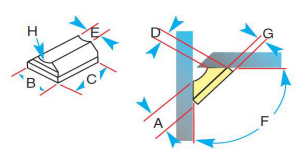
√ Available in 1/4" to 2" (6.3mm - 50.8mm) Tiles

Telephone: 01782 566553 Fax: 01782 566123

GULLCO

CERAMIC WELD BACKING TAPE

KATBAK® Ceramic Weld Backing can Lay Root Weld & Fill in one pass with X-Ray Quality Back Beads

Model	Specifivation / Typical Application	Specs inches / (mm)
1G42-ER (12mtr- 40ft/ box)	This tile is suitable for use with MIG/MAG applications with solid, flux or metal cored wires where minimal penetration is required but highier amperage is necessary because the small up-stands that are present in this tile will not burn away with amperages less than about 120 amps. Each tile is radiused to form the strip around a cylinder.	 A 3/16 4.8 B 1 25.4 C 1 25.4 D 15/64 6 E 1/2 12.7 F 11/32 8.7 G 3/16 r 4.8 r
1G41-R (12mtr- 40ft/ box) √	This is similar to the 1G42-R but has a slightly smaller groove where more penetration is required than with the 1G42-R. Each tile is radiused to form a strip around a cylinder.	 A 1/4 6.3 B 1 25.4 C 1 25.4 D 5/16 7.9 E 3/8 9.5 F 1/32 1 G 3/16 r 4.8 r
1G44-R (9mtr- 30ft/ box) √	This is a larger tile and has a larger groove than the 1G42 or the 1G41-R tile where the user needs more penetration and more substance in the tile. Possibly for submerged arc welding applcations and thicker plates. Each tile is radiused to form the strip around a cylinder.	 A 3/8 9.5 B 1 1/4 31.7 C 1 25.4 D 9/32 7.2 E 11/16 17.5 F 1/16 1.6 G 1/4 r 6.3 r
1G61 (12.2mtr- 40ft/ box) √	This is for inserting behind plates where there is a taper on the backside of the plate. This tile allows the groove portion to fit snugly against the root. Note that these tiles are square edged and so, will not go round a radius. They are meant for flat plates. These tiles are used for MIG/MAG welding with all the wires.	 A 3/8 9.5 B 1 7/32 31 C 1 25.4 D 25/64 10 E 7/16 11.1 F 1/32 0.79 G 1/4 6.3
1G60 (9mtr- 30ft/ box) √	This tile has upturned sides for use when the plates are introduced at an angle or with differing thickness to allow the root of the weldment to seit snugly against the tile and present next to the radiused portion where the root will form.	 A 3/8 9.5 B 1 3/16 30.2 C 1 25.4 D 3/8 9.5 E 7/16 11.1 F 9/64 3.6
1G42-FR (12mtr- 40ft/ box) **1G83-FR** (9mtr- 30ft/ box) **1G42-FR-1/4** (12mtr- 40ft/ box)	This tile is similar to the standard flat tile but it is more flexible to go round a tighter radius. Note that all other tile shapes can be made 1/4" long to aid flexibilty of the tile. Each tile is radiused to form a strip around a cylinder. 1G83-FR is similar to the 1G42-FR but it is a thicker, larger tile to withstand highier currents where minimal penetration is required.	 1G83-FR A 1/4 6.3 B 1 25.4 C 1 25.4 D 3/16r 4.8r 1G83-FR A 5/6 7.9 B 1 1/4 31.7 C 1 25.4 D 3/16r 4.8r 1G42-FR-1/4 A 1/4 6.3 B 1 25.4 C 1/4 6.3 D 3/16r 4.8r
1G80-R (12mtr- 40ft/ box) √	This tile is specially designed to prevent back bead droop in horizontal welding and can be used with MIG welding with solid wire, metal and flux cored wire.	 A 1/4 6.3 B 1 25.4 C 1 25.4 D 1/4 6.3 E 1/2 12.7 F 3/32 2.4 G 3/32r 2.4 r H 3/4 r 19 r I 3/16 r 4.8 r
1G66-B (12mtr- 40ft/ box) √	This is for ditting behind a single bevel, single v butt where a fillet weld must be produced on the backside of the joint during welding on the front side of the joint. possibly where access for welding or repairs is not possible. This tile will produce a mitered fillet.	 A 11/32 8.7 B 3/4 19 C 1 25.4 D 7/32 5.6 E 5/16 7.9 F 90° 90° G 1/8 3.2
1G65-B (12mtr- 40ft/ box) √	Similar applcations to the 1G66-B but the fillet weld produced will be a convex radiused fillet instead of a mitred fillet.	 A 5/16 7.9 B 7/8 22.2 C 1 25.4 D 7/32 5.6 E 7/16 11.1 F 90° 90° G 3/32 2.4 H 9/16 r 14.3 r

√ Available in 1/4" to 2" (6.3mm - 50.8mm) Tiles

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