

# Consumables

# 1



The extensive range of Super 6 consumables for welding and brazing covers products for joining large fabrications through to DIY use. SWP supply high quality products from manufacturers who have been validated at source and Test Certificates can be found on our website. The Super 6 range is made up of six product groups:

## Aluminium

The Aluminum products are supplied for both MIG and TIG in all grades – 4043 and 5356 being the most popular.

## Copper

A large range of products for use across many industries and for general repair and maintenance work.

## Stainless Steel

Stainless Steel is a generic term for a range of steels that contain a minimum of 12% Chromium. Nickel and Molybdenum are added to improve corrosion resistance.

## Steel

This section offers a large range of products including solid and flux cored wires as well as gasless cored wire for the DIY market.


## Electrodes

The electrodes range offer two brands: Super 6 and Super Optimal. Super Optimal are manufactured by our trading partner Superon.

## Gas Welding & Brazing

Our copper coated mild steel rod is suitable for all types of mild steel welding and is particularly suited to welding mild steel sheet.

ZERTIFIKAT ◆ CERTIFICATE ◆ 證書 ◆ CERTIFICADO ◆ CERTIFICAT



**Certificate of conformity of the factory production control**

0036 - CPR - S 128.2020.001

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of March 09<sup>th</sup>, 2011 (Construction Products Regulation - CPR), this certificate applies to the construction product

**Welding consumables acc. to EN ISO 14341, EN ISO 14343, EN ISO 18273 and EN ISO 17632**

for the use in metallic structures or in composite metal and concrete structures.

Produced by or for

**Specialised Welding Products Ltd**  
Unit 1 Withins Point  
Haydock WA11 9UD, UK

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in annex ZA of the harmonised standard

**EN 13479:2017**

under system 2+ are applied and




**the factory production control fulfils all the prescribed requirements set out above.**

This certificate was first issued on 07.12.2020 and will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly and latest on 07.12.2020.

Further information about the product parameters and description of the products are included in the annex 1 to this certificate.

Munich, December 7, 2020

Notified Body, No. 0036  
(D. Zellmer)  
(Leader of the Certification Body)



EQ3056245

TÜV SÜD Industrie Service GmbH, Westendstr. 199, 80686 Munich, Germany

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\* Superon premium products are manufactured exclusively for industrial use and are vacuum packed to deliver a moisture-free electrode.

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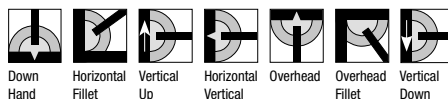
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## Special Alloys

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## 4043

### Features and Applications

- Aluminium alloy containing 5% silicon, for welding duraluminium, cast and wrought alloys  
NB: Weld will discolour if anodised
- General fabrication and construction, shipbuilding, automotive industry, repair and maintenance

### Standards

AWS : A5.10 ER 4043  
EN ISO 18273-S AL4043 (AL SI 5)  
BS 2901 4043A, (NG21)

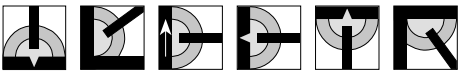
### Mechanical Properties

Melting Point °C	630
UTS N/mm <sup>2</sup>	120
Hardness BHN	45

### Chemical Composition

Al	Si
95.0	5.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

0.5kg Spool		2.0kg Spool		6.0kg Spool	
Pt No.	Diameter	Pt No.	Diameter	Pt No.	Diameter
<b>7004</b>	0.8mm	<b>7008</b>	0.8mm	<b>7012</b>	0.8mm
<b>7005</b>	1.0mm	<b>7009</b>	1.0mm	<b>7013</b>	1.0mm
<b>7006</b>	1.2mm	<b>7010</b>	1.2mm	<b>7014</b>	1.2mm
				<b>7015</b>	1.6mm

## 4047

### Features and Applications

- Excellent corrosion resistance and a low melting point which allows thin Aluminium sheet to be successfully MIG welded  
NB: Weld will discolour if anodised
- Automotive, ship building and offshore, repair and maintenance
- Aluminium alloy containing 12% Silicon

### Standards

AWS : A5.10 ER 4047  
EN ISO 18273 S AL 4047A (AL SI 12)  
BS : 2901 4047A (NG2)

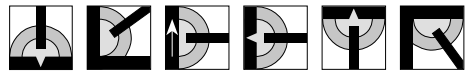
### Mechanical Properties

Melting Point °C	580
UTS N/mm <sup>2</sup>	130
Hardness BHN	50

### Chemical Composition

Al	Si
88.0	12.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

6.0kg Spool	
Pt No.	Diameter
<b>7018</b>	0.8mm
<b>7019</b>	1.0mm
<b>7020</b>	1.2mm

## 5183

### Features and Applications

- Special Aluminium alloy giving improved strength, used when high seawater corrosion resistance is required
- Shipbuilding and offshore, cryogenic plants, power generation and railway industry

### Standards

AWS : A5.10 ER 5183  
 EN ISO 18273 S AL 5183 (AL Mg 4.5 Mn 0.7)  
 BS : 2901 5183

### Mechanical Properties

Melting Point °C	640
UTS N/mm <sup>2</sup>	270
Hardness BHN	65

### Chemical Composition

Al	Mg	Mn
94.0	5.00	0.75

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

6.0kg Spool

Pt No.	Diameter
<b>7040</b>	1.0mm
<b>7041</b>	1.2mm

## 5356

### Features and Applications

- A general purpose Aluminium wire containing 5% magnesium, giving excellent corrosion resistance and high joint strength
- Shipbuilding and offshore, power generation, repair and maintenance and railway industry

### Standards

AWS : A5.10 ER 5356  
 EN ISO 18273 S AL5356 (AL Mg 5)  
 BS : 2901 5356 (NG 6)

### Mechanical Properties

Melting Point °C	635
UTS N/mm <sup>2</sup>	250
Hardness BHN	65

### Chemical Composition

Al	Mg
95.0	5.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

0.5kg Spool		2.0kg Spool		6.0kg Spool	
Pt No.	Diameter	Pt No.	Diameter	Pt No.	Diameter
<b>7023</b>	0.8mm	<b>7030</b>	0.8mm	<b>7034</b>	0.8mm
<b>7024</b>	1.0mm	<b>7031</b>	1.0mm	<b>7035</b>	1.0mm
<b>7025</b>	1.2mm	<b>7032</b>	1.2mm	<b>7036</b>	1.2mm

## 1050

### Features and Applications

- A pure Aluminium (99.5%) rod producing a ductile weld that can be stretched, drawn or hammered without fracture
- Chemical, food and electronics industries, repair and general maintenance

### Standards

AWS : A5.10 ER 1100  
EN ISO 18273-S AL 1070 (Al 99.7)  
BS 2901 1050A (GIB)

### Mechanical Properties

Melting Point °C	650
UTS N/mm <sup>2</sup>	90
Hardness BHN	15

### Chemical Composition

Al	Fe	Cu
99.5	0.40	0.10

### Welding Positions



### Current Type

AC

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

**Pt No. Diameter**

**7047** 1.6mm

**7048** 2.4mm

**7049** 3.2mm

## 4043

### Features and Applications

- Aluminium alloy with 5% silicon gives excellent flow and penetration. Suitable for joining duraluminium, cast and wrought alloys. NB: Weld will discolour if anodised
- Ship building, automotive and food industries, repair and maintenance

### Standards

AWS : A5.10 ER 4043  
EN ISO 18273 S Al 4043A (Al Si 5)  
BS 2901 4043A (NG 21)

### Mechanical Properties

Melting Point °C	630
UTS N/mm <sup>2</sup>	120
Hardness BHN	45

### Chemical Composition

Al	Si
95.0	5.00

### Welding Positions



### Current Type

AC

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

**Pt No. Diameter**

**7050** 1.6mm

**7051** 2.4mm

**7052** 3.2mm

## 4047

### Features and Applications

- Excellent corrosion resistance and low melting point  
NB: Weld will discolour if anodised
- Melts at 80 °C lower than pure Aluminium, can be used as a gas brazing rod
- Automotive, shipbuilding, offshore, repair and maintenance

### Standards

AWS : A5.10 ER 4047  
EN ISO 18273 S AL 4047A (AL SI 12)  
BS 2901 4047A (NG2)

### Mechanical Properties

Melting Point °C	580
UTS N/mm <sup>2</sup>	130
Hardness BHN	50

### Chemical Composition

Al	Si
88.0	12.0

### Welding Positions



### Current Type

AC

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

Pt No.	Diameter
<b>7054</b>	1.6mm
<b>7055</b>	2.4mm
<b>7056</b>	3.2mm

## 5356

### Features and Applications

- A general purpose Aluminium rod containing 5% magnesium, giving excellent corrosion resistance and high joint strength
- Shipbuilding, offshore, power generation and railway industries, repair and maintenance

### Standards

AWS : A5.10 ER 5356  
EN ISO 18273 S AL 5356 (AL Mg 5)  
BS 2901 5356 (NG6)

### Mechanical Properties

Melting Point °C	635
UTS N/mm <sup>2</sup>	250
Hardness BHN	65

### Chemical Composition

Al	Mg
95.0	5.00

### Welding Positions



### Current Type

AC

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

Pt No.	Diameter
<b>7057</b>	1.6mm
<b>7058</b>	2.4mm
<b>7059</b>	3.2mm

## 5183

### Features and Applications

- Special Aluminium alloy giving improved strength
- Used when high seawater corrosion resistance is required
- Shipbuilding, offshore, power generation, cryogenic plants and railway industries

### Standards

AWS : A5.10 ER 5183  
EN ISO 18273 AL 5183 (AL Mg 4.5 Mn 0.7)  
BS 2901 5183

### Mechanical Properties

Melting Point °C	640
UTS N/mm <sup>2</sup>	300
Hardness BHN	65

### Chemical Composition

Al	Mg	Mn
94.0	5.00	0.75

### Welding Positions



### Current Type

AC

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

#### Pt No. Diameter

**7060** 1.6mm

**7061** 2.4mm

**7062** 3.2mm

## 5556

### Features and Applications

- Aluminium alloy containing 5.3% Magnesium
- All elements closely controlled for optimum weld strength
- Military industry, power generation, railway industry, shipbuilding and offshore

### Standards

AWS : A5.10 ER 5556  
EN ISO 18273 S AL 5556A (Al Mg5 Mn)  
BS 2901 5556

### Mechanical Properties

Melting Point °C	640
UTS N/mm <sup>2</sup>	300
Hardness BHN	70

### Chemical Composition

Al	Mg	Mn	Cr	Ti
93.0	5.30	0.80	0.10	0.01

### Welding Positions



### Current Type

AC

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

#### Pt No. Diameter

**7063** 1.6mm

**7064** 2.4mm

**7065** 3.2mm



## C7

### Features and Applications

- High quality wire containing a minimum of 98.5% copper with deoxidizing elements suitable for joining oxygen free copper and copper materials subject to high strain
- Copper boilers, brewing industry, power generation

### Standards

AWS : A5.7 ER Cu  
 EN 24373 Cu1898 (Cu Sn1)  
 BS 2901 C7

### Mechanical Properties

Melting Point °C	1050
UTS N/mm <sup>2</sup>	220
Hardness BHN	70

### Chemical Composition

Cu	Mn	Si
99.5	0.25	0.25

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

12.5kg Spool

Pt No.	Diameter
<b>7120</b>	0.8mm
<b>7121</b>	1.0mm
<b>7122</b>	1.2mm

## C9

### Features and Applications

- Ideal for fusion welding materials of similar composition eg copper alloy (brass). Frequently used in artistic foundries where good colour match is required, also for MIG brazing zinc coated steel sheets in the automotive industry
- Zinc coated steel sheets in the automotive industry (Boron steel)

### Standards

AWS : A5.7 ER Cu Si - A  
 EN 24373 Cu 6560 (Cu Si3 Mn1)  
 BS 2901 C9

### Mechanical Properties

Melting Point °C	980
UTS N/mm <sup>2</sup>	350
Hardness BHN	90

### Chemical Composition

Cu	Mn	Si
96.0	1.00	3.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

4.0kg Spool      12.5kg Spool

Pt No.	Diameter	Pt No.	Diameter
<b>7126</b>	0.8mm	<b>7129</b>	0.8mm
<b>7127</b>	1.0mm	<b>7130</b>	1.0mm
<b>7128</b>	1.2mm	<b>7131</b>	1.2mm

## C11

### Features and Applications

- A phosphor bronze wire containing 7% tin suitable for fusion welding, bronze castings, cast iron and copper alloys. Also recommended for brazing ferrous and dissimilar metal joints
- Ship building, process industry, repair and maintenance and artistic foundries

### Standards

AWS : A5.7 ER Cu Sn – C  
EN 24373 Cu5180 (Cu Sn 6P)  
BS 2901 C11

### Mechanical Properties

Melting Point °C	930
UTS N/mm <sup>2</sup>	260
Hardness BHN	80

### Chemical Composition

<b>Cu</b>	<b>Sn</b>
93.0	7.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

4.0kg Spool	12.5kg Spool		
<b>Pt No.</b>	<b>Diameter</b>	<b>Pt No.</b>	<b>Diameter</b>
<b>7104</b>	1.0mm	<b>7106</b>	0.8mm
<b>7105</b>	1.2mm	<b>7107</b>	1.0mm
		<b>7108</b>	1.2mm

## C7

### Features and Applications

- High quality rod containing a minimum of 98.5% copper with deoxidizing elements suitable for joining oxygen free copper and copper materials subject to high strain
- Copper boilers, brewing industry and power generation

### Standards

AWS : A5.7 ER Cu  
EN 24373 Cu 1898 (Cu Sn1)  
BS 2901 C7

### Mechanical Properties

Melting Point °C	1025
UTS N/mm <sup>2</sup>	220
Hardness BHN	70

### Chemical Composition

<b>Cu</b>	<b>Si</b>	<b>Mn</b>
99.5	0.25	0.25

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube	
<b>Pt No.</b>	<b>Diameter</b>
<b>7158</b>	1.6mm
<b>7159</b>	2.4mm
<b>7160</b>	3.2mm

## C9

### Features and Applications

- Ideal for fusion welding materials of similar composition eg copper alloy (brass). Frequently used in artistic foundries where good colour match is required, also TIG brazing ferrous and dissimilar materials
- Artistic foundries, automotive industry, repair and maintenance

### Standards

AWS : A5.7 ER Cu Si - A  
EN 24373 Cu 6560 (Cu Si 3 Mn 1)  
BS 2901 C9

### Mechanical Properties

Melting Point °C	980
UTS N/mm <sup>2</sup>	350
Hardness BHN	90

### Chemical Composition

<b>Cu</b>	<b>Si</b>	<b>Mn</b>
96.0	3.00	1.00

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

**Pt No. Diameter**

**7154** 1.6mm

**7155** 2.4mm

**7156** 3.2mm

## C11

### Features and Applications

- Phosphor bronze rod containing 7% tin, produced for fusion welding phosphor bronze castings where a good colour match is required and for building up worn bearing surfaces. Also ideal for TIG brazing and welding dissimilar joints
- Shipbuilding, processing industry, artistic foundries

### Standards

AWS : A5.7 ER Cu Sn - C  
EN 24373 Cu5180 (Cu Sn 6P)  
BS 2901 C11

### Mechanical Properties

Melting Point °C	930
UTS N/mm <sup>2</sup>	260
Hardness BHN	80

### Chemical Composition

<b>Cu</b>	<b>Sn</b>
93.0	7.00

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

**Pt No. Diameter**

**7140** 1.6mm

**7141** 2.4mm

**7142** 3.2mm

## 347

### Features and Applications

- Niobium stabilized stainless steel wire prevents weld decay and offers excellent corrosion resistance. Suitable for use on 18/8 type stainless steel and where the weld is subjected to temperatures above 400 °C
- Chemical, food and power generation industries

### Standards

AWS : 5.9 ER 347  
 EN ISO 14343 : 19 9NbSi  
 BS 2901 347 S96

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	650
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr	Nb
0.04	0.80	1.50	10.0	20.0	0.60

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

15.0kg Spool

#### Pt No. Diameter

**7180** 0.8mm

**7181** 1.0mm

## 308 LSI

### Features and Applications

- For welding 18/8 (304) austenitic stainless steels providing good corrosion and wear resistance
- Chemical, food and power generation industries

### Standards

AWS : 5.9 ER 308 LSI  
 EN ISO 14343 : 19 9 LSI  
 BS 2901 308 S 93

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	640
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr
0.02	0.80	1.50	10.0	21.0

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

0.7kg Spool

5.0kg Spool

15.0kg Spool

#### Pt No. Diameter

**7183** 0.6mm

**7184** 0.8mm

**7185** 1.0mm

#### Pt No. Diameter

**7186** 0.6mm

**7187** 0.8mm

**7188** 1.0mm

**7189** 1.2mm

#### Pt No. Diameter

**7190** 0.8mm

**7191** 1.0mm

**7192** 1.2mm

## 309 LSI

### Features and Applications

- Stainless steel wire ideal for joining material of similar composition and also dissimilar stainless steel
- Chemical, power generation, repair and maintenance

### Standards

AWS : 5.9 ER 309LSI  
EN ISO 14343 : 23 12 LSI  
BS 2901 309 S93

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	650
Hardness BHN	180

### Chemical Composition

<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>Ni</b>	<b>Cr</b>
0.10	0.40	1.50	13.0	26.0

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Spool	15.0kg Spool
<b>Pt No.</b> <b>Diameter</b>	<b>Pt No.</b> <b>Diameter</b>
<b>7193</b> 0.8mm	<b>7195</b> 0.8mm
<b>7194</b> 1.0mm	<b>7196</b> 1.0mm
	<b>7197</b> 1.2mm

## 310

### Features and Applications

- Chromium/Nickel welding wire for welding heat-resistant austenitic steels of the 25Cr/20Ni type
- Chemical industry, power generation

### Standards

AWS : A5.9 ER 310  
EN ISO 14343 : A 25 20

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	590
Hardness BHN	200

### Chemical Composition

<b>C</b>	<b>Mn</b>	<b>Ni</b>	<b>Cr</b>
0.01	1.80	21.0	26.0

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

15.0kg Spool
<b>Pt No.</b> <b>Diameter</b>
<b>7175</b> 0.8mm
<b>7176</b> 1.0mm
<b>7177</b> 1.2mm

## 312

### Features and Applications

- A 29 – 9 stainless steel suitable for joining difficult to weld steels such as tool and spring steel. Also for dissimilar materials and has a high resistance to weld metal cracking
- Repairs to tool/spring/manganese/high speed and cast steels Recommended for repairs to dies and moulds

### Standards

AWS : 5.9 ER 312  
EN ISO 14343 : 29 19  
BS 2901 312 S94

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	750
Hardness BHN	200

### Chemical Composition

C	Si	Mn	Ni	Cr	Mo
0.10	0.40	1.70	9.00	30.0	0.10

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Spool		15.0kg Spool	
Pt No.	Diameter	Pt No.	Diameter
<b>7208</b>	0.8mm	<b>7210</b>	0.8mm
<b>7209</b>	1.0mm	<b>7211</b>	1.0mm

## 316 LSI

### Features and Applications

- A molybdenum bearing stainless steel with low carbon content. It is corrosion resistant for welding molybdenum bearing austenitic stainless steel
- Power generation, chemical, food industries

### Standards

AWS : 5.9 ER 316 LSI  
EN ISO 14343 : 19 12 3 LSI  
BS 2901 316 S93

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	650
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr	Mo
0.02	0.80	1.50	12.0	19.0	2.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

0.7kg Spool		5.0kg Spool		15.0kg Spool	
Pt No.	Diameter	Pt No.	Diameter	Pt No.	Diameter
<b>7198</b>	0.6mm	<b>7201</b>	0.6mm	<b>7204</b>	0.6mm*
<b>7199</b>	0.8mm	<b>7202</b>	0.8mm	<b>7205</b>	0.8mm
<b>7200</b>	1.0mm	<b>7203</b>	1.0mm	<b>7206</b>	1.0mm
				<b>7207</b>	1.2mm

\*Supplied on 12.5kg spool

## 347

### Features and Applications

- Niobium stabilised stainless steel rod prevents weld decay and offers excellent corrosion resistance. Suitable for use on 18/8 type stainless steel and where the weld is subjected to temperatures above 400°C
- Chemical, food and power generation industries

### Standards

AWS : 5.9 ER 347  
EN ISO 14343 : 19 9 Nb  
BS 2901 347 S96

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	650
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr	Nb
0.04	0.40	1.50	10.0	20.0	0.60

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7213</b>	1.2mm
<b>7214</b>	1.6mm
<b>7215</b>	2.4mm

## 308 L

### Features and Applications

- Suitable for joining 18/8 (304) austenitic stainless steels providing good corrosion and wear resistance
- Chemical, food and power generation industries

### Standards

AWS : 5.9 308L  
EN ISO 14343 :19 9L  
BS 2901 308 S92

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	640
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr
0.02	0.40	1.50	10.0	21.0

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7216</b>	1.6mm
<b>7217</b>	2.4mm
<b>7218</b>	3.2mm

## 309 L

### Features and Applications

- Stainless steel rod containing higher amounts of chromium and nickel. Can be used for joining material of similar composition and dissimilar stainless steels
- Chemical, power generation, repair and maintenance

### Standards

AWS : 5.9 ER 309 L  
EN ISO 14343 – A W23 12L

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	650
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr
0.10	0.40	1.50	13.0	26.0

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

**Pt No.** **Diameter**

**7219** 1.6mm

**7220** 2.4mm

**7221** 3.2mm

## 310

### Features and Applications

- Chromium/Nickel welding wire for welding heat-resistant austenitic steels of the 25Cr/20Ni type
- Chemical industry, power generation

### Standards

AWS : A5.9 ER 310  
EN ISO 14343 :A 25 20

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	590
Hardness BHN	200

### Chemical Composition

C	Mn	Ni	Cr
0.01	1.80	21.0	26.0

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

**Pt No.** **Diameter**

**7229** 1.6mm

**7230** 2.4mm

**7231** 3.2mm



## 312

### Features and Applications

- A 29-9 stainless steel rod suitable for joining difficult to weld steel such as tool, spring steel and dissimilar materials and has a high resistance to weld metal cracking
- Repairs to tool/spring/manganese/high speed and cast steels  
Also recommended for repairs to dies and moulds

### Standards

AWS : 5.9 ER 312  
EN ISO 14343 : 29-9  
BS 2901 312 S94

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	750
Hardness BHN	200

### Chemical Composition

C	Si	Mn	Ni	Cr	Mo
0.10	0.40	1.70	9.00	30.0	0.10

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7227</b>	1.6mm
<b>7228</b>	2.4mm

## 316 L

### Features and Applications

- A molybdenum bearing stainless steel rod with low carbon content. It is corrosion resistant for joining molybdenum bearing austenitic stainless steel
- Nuclear, chemical and food industries

### Standards

AWS : 5.9 ER 316L  
EN ISO 14343 : 19123L  
BS 2901 316 S92

### Mechanical Properties

Melting Point °C	1440
UTS N/mm <sup>2</sup>	650
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Ni	Cr	Mo
0.02	0.40	1.50	12.0	19.0	2.00

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7222</b>	1.0mm
<b>7223</b>	1.2mm
<b>7224</b>	1.6mm
<b>7225</b>	2.4mm
<b>7226</b>	3.2mm

## SG2

### Features and Applications

- A copper coated mild steel MIG wire for welding mild and medium tensile steels
- General construction, shipbuilding and automotive industries

### Standards

AWS : A5.18 ER70 S-6  
 BS : 2901 : A18  
 EN ISO 14341-A-G 42 4 C1/M21 3Si1  
 EN 10204 : 3.1

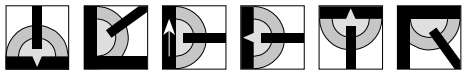
### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	500
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.10	0.80	1.30

### Welding Positions



### Current Type

DC+

### Shielding Gas

Argon / CO<sub>2</sub> mix

### Manufacturer's Approvals

Approvals on request

### Product Information

0.7kg Spool		5.0kg Spool		15.0kg Spool	
Pt No.	Diameter	Pt No.	Diameter	Pt No.	Diameter
<b>7300</b>	0.6mm	<b>7303</b>	0.6mm	<b>7306</b>	0.6mm
<b>7301</b>	0.8mm	<b>7304</b>	0.8mm	<b>7307</b>	0.8mm
<b>7302</b>	1.0mm	<b>7305</b>	1.0mm	<b>7308</b>	1.0mm
				<b>7309</b>	1.2mm
				<b>7310</b>	1.6mm

## SG2 – SuperPAK

### Features and Applications

- A copper coated mild steel MIG wire for welding mild and medium tensile steels
- General construction, shipbuilding and automotive industries

### Standards

AWS : A5.18 ER70 S-6  
 BS : 2901 : A18  
 EN ISO 14341-A-G 42 4 C1/M21 3Si1  
 EN 10204 : 3.1

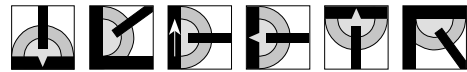
### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	500
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.10	0.80	1.30

### Welding Positions



### Current Type

DC+

### Shielding Gas

Argon / CO<sub>2</sub> mix

### Manufacturer's Approvals

Approvals on request

### Product Information

250kg Drum	
Pt No.	Diameter
<b>7312</b>	0.8mm
<b>7313</b>	1.0mm
<b>7314</b>	1.2mm



## SG3

### Features and Applications

- A copper coated steel Mig wire with increased silicon and manganese for improved UTS
- General fabrication, shipbuilding, power generation

### Standards

AWS : A5.18 ER70 S – 6  
 EN ISO 636 – A W4 Si1  
 EN ISO 14341-A-G 46 4 M21/42 4 C1 4Si1  
 EN 10204 : 3.1

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	600
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.10	1.00	1.75

### Welding Positions



### Current Type

DC+

### Shielding Gas

Argon / CO<sub>2</sub> mix

### Manufacturer's Approvals

Approvals on request

### Product Information

15.0kg Spool

Pt No.	Diameter
<b>7320</b>	0.8mm
<b>7321</b>	1.0mm
<b>7322</b>	1.2mm

## A32

### Features and Applications

- A copper coated alloy steel wire containing 1.0% chromium and 0.5% molybdenum for welding low alloy and creep resistant steels
- Shipbuilding, offshore, chemical and power generation industries

### Standards

BS 2901 A32

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	500
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Cr	Mo
0.10	0.60	1.00	1.30	0.50

### Welding Positions



### Current Type

DC+

### Shielding Gas

Argon / CO<sub>2</sub> mix

### Manufacturer's Approvals

Approvals on request

### Product Information

15.0kg Spool

Pt No.	Diameter
<b>7329</b>	1.0mm
<b>7330</b>	1.2mm

## E71T-1

### Features and Applications

- A rutile flux cored wire for welding structures fabricated in mild steel and low alloyed structural steel in all positions
- Shipbuilding, offshore and general fabrications

### Standards

AWS : E 71 T-1  
EN ISO 17632-A-T 42 4 R C/M 2 H10

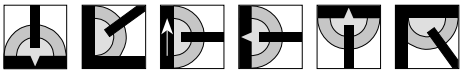
### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	510
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.05	0.60	1.30

### Welding Positions



### Current Type

DC+

### Shielding Gas

Argon / CO<sub>2</sub> mix

### Manufacturer's Approvals

Approvals on request

### Product Information

15.0kg Spool

Pt No.	Diameter
<b>7332</b>	1.2mm

## Gasless Flux Cored Wire

### Features and Applications

- Self shielding steel MIG wire. Ideal for DIY use
- Automotive repair, general repair and maintenance

### Standards

AWS : E71T – GS

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	400
Hardness BHN	120

### Chemical Composition

C	Si	Mn	Al
0.25	0.40	0.70	2.40

### Welding Positions



### Current Type

AC/DC+

### Shielding Gas

None required

### Manufacturer's Approvals

Approvals on request

### Product Information

0.45kg Spool		1.0kg Spool		4.5kg Spool	
Pt No.	Diameter	Pt No.	Diameter	Pt No.	Diameter
<b>7335</b>	0.8mm	<b>7337</b>	0.8mm	<b>7338</b>	0.8mm
<b>7336</b>	0.9mm			<b>7339</b>	0.9mm

## 600S

### Features and Applications

- Solid hard facing MIG wire for high wear resistance
- Agricultural, earth moving and stone crushing industries

### Standards

Din 8555 : MSG 6 – GZ – 60

### Mechanical Properties

Melting Point °C	1450
Hardness BHN	580/650

### Chemical Composition

C	Si	Mn	Cr
0.45	3.00	0.40	9.00

### Welding Positions



### Current Type

DC+

### Shielding Gas

Argon / CO<sub>2</sub> mix

### Manufacturer's Approvals

Approvals on Approvals on request

### Product Information

15.0kg Spool

#### Pt No. Diameter

**7345** 1.0mm

**7346** 1.2mm

## A15

### Features and Applications

- A copper coated mild steel rod with a high level of deoxidants (triple deoxidised) to enable sound porosity free welds to be made on mild and low alloy steels
- General fabrication, power generation and chemical industries

### Standards

AWS : ER 70S-2

EN 1668 W2 Ti

BS 2901 A15

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	440
Hardness BHN	120

### Chemical Composition

C	Si	Mn	Al
0.06	0.60	1.30	0.10

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

#### Pt No. Diameter

**7350** 1.0mm

**7351** 1.2mm

**7352** 1.6mm

**7353** 2.4mm

**7354** 3.2mm

## A17

### Features and Applications

- A low carbon double deoxidised rod for TIG welding mild steel
- General fabrication and shipbuilding

### Standards

BS 2901 A17

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	400
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.10	0.30	1.00

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on Approvals on request

### Product Information

5.0kg Tube

#### Pt No. Diameter

**7356** 1.6mm

**7357** 2.4mm

## A18

### Features and Applications

- Copper coated deoxidised steel rod for TIG welding mild steel
- General fabrication and ship building

### Standards

AWS : ER 70S – 6

BS 2901 A18

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	400
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.10	1.00	1.30

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

#### Pt No. Diameter

**7360** 1.0mm

**7361** 1.2mm

**7362** 1.6mm

**7363** 2.4mm

**7364** 3.2mm

## A31

### Features and Applications

- A copper coated alloy steel rod containing 0.5% molybdenum. Suitable for use on low temperature pressure vessel and pipe work applications
- Shipbuilding, offshore, chemical and power generation industries

### Standards

AWS : ER 80S – D2  
BS 2901 A31

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	450
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Mo
0.10	0.70	1.80	0.50

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7366</b>	1.6mm
<b>7367</b>	2.4mm

## A32

### Features and Applications

- A copper coated alloy steel rod containing 1.0% chromium and 0.5% molybdenum for welding low alloy and creep resistant steels
- Shipbuilding, offshore, chemical, power generation industries

### Standards

AWS : ER 80S – B2  
BS 2901 A32

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	460
Hardness BHN	180

### Chemical Composition

C	Si	Mn	Cr	Mo
0.10	0.55	1.00	1.30	0.5

### Welding Positions



### Current Type

DC-

### Shielding Gas

Pure Argon

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7370</b>	1.6mm
<b>7371</b>	2.4mm
<b>7372</b>	3.2mm

## Tungsten Electrodes

### Applications

Tungsten	Material	Current
Ceriated	Any Material	AC-DC
Thoriated	Stainless or Mild Steel	DC
Zirconiated	Aluminium & Alloys	AC
Lanthanated	Any Material	AC-DC
Multi-Type	Any Material	AC-DC
Pure	Aluminium & Magnesium	AC
E3 Rare Earth	Any Material	AC-DC
WR	Any Material	AC-DC

### Standards

EN26848



Electrode Diameter (mm)	2% Thoriated Red Part No.	0.8% Zirconiated White Part No.	2% Ceriated Grey Part No.	1% Lanthanated Black Part No.	Multi-type Gold Part No.	Pure Tungsten Green Part No.	E3 Rare Earth Purple Part No.	WR02 Tungsten Turquoise Part No.	2% Lanthanated Blue Part No.	Pack Qty
1.0	<b>1104</b>	<b>1121</b>	<b>1094</b>	<b>1132</b>	<b>1560</b>	<b>1895</b>	–	<b>1894</b>	<b>1155</b>	10
1.2	<b>1105</b>	<b>1123</b>	<b>1095</b>	<b>1142</b>	<b>1561</b>	–	–	–	–	10
1.6	<b>1106</b>	<b>1111</b>	<b>1097</b>	<b>1170</b>	<b>1562</b>	<b>1933</b>	<b>1990</b>	<b>1994</b>	<b>1156</b>	10
2.0	<b>1117</b>	<b>1124</b>	<b>1096</b>	<b>1143</b>	<b>1149</b>	<b>1932</b>	<b>1991</b>	<b>1995</b>	<b>1159</b>	10
2.4	<b>1107</b>	<b>1112</b>	<b>1098</b>	<b>1171</b>	<b>1563</b>	<b>1934</b>	<b>1992</b>	<b>1996</b>	<b>1157</b>	10
3.2	<b>1108</b>	<b>1113</b>	<b>1099</b>	<b>1172</b>	<b>1564</b>	<b>1935</b>	<b>1993</b>	<b>1997</b>	<b>1158</b>	10
4.0	<b>1109</b>	<b>1114</b>	<b>1100</b>	<b>1173</b>	<b>1565</b>	<b>1936</b>	–	–	–	10
4.8	<b>1110</b>	<b>1115</b>	<b>1101</b>	<b>1174</b>	<b>1566</b>	–	–	–	–	5
6.4	<b>1118</b>	<b>1116</b>	<b>1102</b>	<b>1175</b>	<b>1567</b>	–	–	–	–	5



## E6013

### Features and Applications

- Rutile cellulosic coated electrode for welding in all positions, especially suitable for where one single type of electrode is required
- Ship building, offshore, General fabrication, repair and maintenance

### Standards

AWS : E 6013  
 EN ISO 2560 : E420 RC11  
 EN 1024 : 3.1

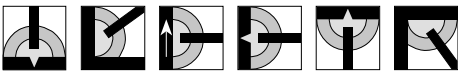
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	410-450
Tensile Strength N/mm <sup>2</sup>	460-510
Elongation %	24-28

### Chemical Composition

C	Si	Mn
0.12	0.40	0.60

### Welding Positions



### Current Type

AC/DC+

### Arc Voltage

42V

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg & 1.0kg Pack / 20.0kg Carton & 2.5kg Pack / 15.0kg Carton

5.0kg	2.5kg	1.0kg	Diameter	Length	Current
<b>7400</b>			2.0mm	300mm	45-80
<b>7401</b>	<b>4500</b>	<b>7397</b>	2.5mm	350mm	60-110
<b>7402</b>	<b>4501</b>	<b>7398</b>	3.2mm	350mm	100-140
<b>7403</b>	<b>4502</b>	<b>7399</b>	4.0mm	400mm	140-180
<b>7404</b>			5.0mm	400mm	130-220

## E7018

### Features and Applications

- Universal basic coated low hydrogen electrode for applications where high demands on impact value (even at low temperatures) are required. Excellent welding characteristics in all positions (except vertically downward)
- Ship building, offshore gas and oil industries, power generation

### Standards

AWS : E7018  
 EN ISO 2560 : E42 5 B 32H5

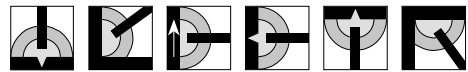
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	460-490
Tensile Strength N/mm <sup>2</sup>	560
Elongation %	25-30

### Chemical Composition

C	Si	Mn
0.05	0.55	1.00

### Welding Positions



### Current Type

AC/DC+

### Arc Voltage

65V

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Pack / 20.0kg Carton (Sold by Carton)

Part No.	Diameter	Length	Current
<b>7408</b>	2.5mm	350mm	80-100
<b>7409</b>	3.2mm	350mm	100-140
<b>7410</b>	4.0mm	400mm	130-190
<b>7411</b>	5.0mm	400mm	190-240

## Super Optimal 6013

### Features and Applications

- Rutile type medium coated electrode, used for the welding of large structures and process pipe work in the shipbuilding and construction industries where precise fit-ups are difficult to achieve. SUPER OPTIMAL 6013 is a superior quality electrode designed to give high impact toughness properties.

### Standards

AWS A5.1: E6013  
EN ISO 2560-A: E38 0 R 12

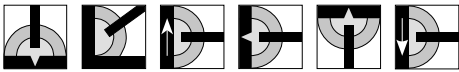
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	≥380
Tensile Strength N/mm <sup>2</sup>	470-540
Elongation %	≥24

### Chemical Composition

C	Si	Mn	P	S
0.07	0.20	0.50	0.03	0.03

### Welding Positions



### Current Type

AC/DC (±)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vaccum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7601</b>	2.5mm	350mm	60-80
<b>7602</b>	3.2mm	350mm	110-135
<b>7603</b>	4.0mm	350mm	160-180
<b>7604</b>	5.0mm	35mm	180-230

## Super Optimal 7018 S

### Features and Applications

- Basic heavy coated, electrode for producing tough and crack-free welded joints even on steels having a carbon content up to 0.40%. Good operating characteristics when positional welding. Weld metal has good toughness properties down to -50°C. Ultimate mechanical properties in 7018-1 group.

### Standards

AWS A5.1: E7018-1 H4  
EN 499: E 42 5 B 32 H5  
EN ISO 2560: E 42 5 B 32 H5

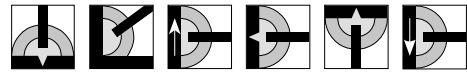
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	450
Tensile Strength N/mm <sup>2</sup>	550-620
Elongation %	30

### Chemical Composition

C	Si	Mn	P	S
0.07	0.30	1.40	0.025	0.020

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vaccum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7605</b>	2.5mm	350mm	60-80
<b>7606</b>	3.2mm	350mm	110-135
<b>7607</b>	4.0mm	350mm	140-180

## Super Optimal 6010

### Features and Applications

- Cellulosic coated deep penetration electrode for welding of pipes and pipelines in all positions using conventional and stove pipe techniques. Characterised by a deeply penetrating, forceful and spray type arc. Excellent arc striking/re-striking. It is suitable for welding root passes, fill and cover passes.

### Standards

AWS : A5.1 : E6010  
 EN ISO 2560-A : E38 3 C 21  
 EN 499 : E 38 3 C 21

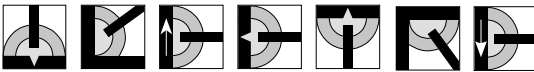
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	400
Tensile Strength N/mm <sup>2</sup>	470
Elongation %	30

### Chemical Composition

C	Si	Mn
0.10	0.20	0.60

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vaccum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7405</b>	2.5mm	350mm	40-70
<b>7406</b>	3.2mm	350mm	70-100
<b>7407</b>	4.0mm	350mm	100-140

## Super Optimal 7016

### Features and Applications

- Basic coated, low hydrogen electrode for producing tough and crack-free welded joints. Good operating characteristics when positional welding. Excellent for joints access making electrodes suitable for root joint welding. Weld metal has good toughness properties down to -50°C. Suitable for most heavy industries.

### Standards

AWS A5.1 : E7016 - H4  
 EN ISO 2560-A : E 42 5 B 1 2 H5  
 EN 499 : E 42 5 B 12 H5

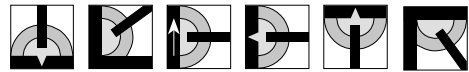
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	450
Tensile Strength N/mm <sup>2</sup>	550-620
Elongation %	30

### Chemical Composition

C	Si	Mn	S	P
0.07	0.30	1.30	0.020	0.025

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vaccum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7412</b>	2.5mm	350mm	50-80
<b>7413</b>	3.2mm	350mm	90-130
<b>7414</b>	4.0mm	350mm	130-170

## Super Optimal 7024

### Features and Applications

- High efficiency, iron powder electrode designed for outstanding deposition rates with efficiency of approximately 140-150%. Excellent arc stability, soft fusion, fine ripples, self releasing slag, very low spatter. Suitable for heavy steel structures, storage tanks, bridge girders, earth moving equipment fabrication, etc.

### Standards

AWS A 5.1 : E 7024  
 ISO 2560-A : E 42 0 RR 53  
 EN 499 : E 42 0 RR 53

### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	>400
Tensile Strength N/mm <sup>2</sup>	510-600
Elongation %	24

### Chemical Composition

<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>S</b>	<b>P</b>
0.10	0.40	0.90	0.020	0.025

### Welding Positions



### Current Type

AC/DC (-)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vacuum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7415</b>	3.2mm	350mm	120-150
<b>7416</b>	4.0mm	350mm	150-190
<b>7417</b>	5.0mm	350mm	180-230

## Cutting/Gouging

### Features and Applications

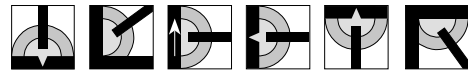
- Ideal for cutting, grooving and gouging steels, stainless steel, copper alloy, cast iron and cast steels

### Standards

### Mechanical Properties

### Chemical Composition

### Welding Positions



### Current Type

AC/DC (-)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vacuum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7420S</b>	3.2mm	350mm	150-200
<b>7421S</b>	4.0mm	350mm	200-250
<b>7422S</b>	5.0mm	350mm	300-350

## Superhard 650

### Features and Applications

- High alloyed air hardening type electrode depositing non-machineable weld metal, the deposit is free from Cracks, porosities and slag inclusions. Recommended for rock drills, drill bits, coal cutter blades, bulldozer blades, excavator teeth, bucket lips and other metal to metal wear.

### Standards

DIN 8555 : E6-UM-60-S

### Mechanical Properties

Hardness 58-60 HRC

### Chemical Composition

C	Si	Mn	Cr	Fe
0.50	0.60	0.60	7.50	Balance

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Vacuum Inner Pack / 20.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7423S</b>	2.5mm	350mm	90-120
<b>7424S</b>	3.2mm	350mm	140-180
<b>7425S</b>	4.0mm	350mm	180-230

## Supercast Ultima

### Features and Applications

- Nickel electrode for welding of grey cast iron, malleable iron, cast iron and for welding on fatigued casted parts. For rectification of castings. Ferrocast ultima gives perfect welding results, even with low amperages. The arc is smooth and intensive, low spatters with easy removal of slag.

### Standards

AWS A 5.15 : ENI-CI

### Mechanical Properties

Hardness 165 HB (approximately)  
Tensile Strength N/mm<sup>2</sup> 450

### Chemical Composition

C	Si	Mn	Ni	Fe & Others
1.00	0.50	0.35	97.50	Balance

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vacuum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7430S</b>	2.5mm	350mm	50-70
<b>7431S</b>	3.2mm	350mm	70-90
<b>7432*</b>	4.0mm	350mm	100-130

\*Supplied on 1.0kg Packet

## Supercast NiFe

### Features and Applications

- Graphite basic coated electrode with a Ferro-Nickel alloy deposit for joining and repairing nodular cast iron. Deposit homogeneous and highly resistant against cracks. Particularly recommended for dissimilar welding of cast iron to steels and constructions of cast iron.

### Standards

AWS A 5.15 : E NiFe-C1  
DIN 8573 : E NiFe- 1 BG11

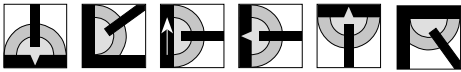
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	>480
Hardness	190 HB

### Composition

Ni
56.0

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vaccum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7434S</b>	2.5mm	350mm	60
<b>7435S</b>	3.2mm	350mm	80
<b>7436S</b>	4.0mm	350mm	120

## Super Optimal 308L-17

### Features and Applications

- Low carbon Rutile-silica-coated 19Cr, 10Ni austenitic stainless steel electrode with controlled ferrite approximately 6-8% for maximum resistance to cracking and corrosion. Core wire is 308LER. Coating with very low moisture pick up. Soft fusion without spatters, easy slag removal and exceptional weld bead.

### Standards

AWS A 5.4 : E 308L-17  
DIN 8556 : E 19 9 LR 23  
EN 1600 : E 19 9 L R 32

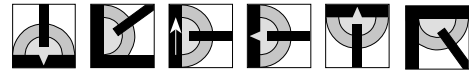
### Mechanical Properties

ISO- V J RT	60
Tensile Strength N/mm <sup>2</sup>	610
Elongation %	38

### Composition

C	Si	Mn	Cr	Ni	Mo	S	P
0.03	0.90	0.80	19.00	9.50	0.10	0.010	0.025

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vaccum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7438S</b>	2.5mm	350mm	50-70
<b>7439S</b>	3.2mm	350mm	70-100
<b>7440S</b>	4.0mm	350mm	100-140

## Super Optimal 309L-17

### Features and Applications

- Rutile type low carbon MMA electrode for joining dissimilar steels (austenitic to ferritic steels) and for cladding of austenitic steels. Weld metal consists of austenite with approximately 15% delta ferrite. Cladding on unalloyed and low-alloy steels are corrosion resistant in the first layer.

### Standards

AWS A 5.4 : E 309L- 17  
 DIN 8556 : E 23 12 LR 23  
 EN 1600 : E 23 12 LR 12

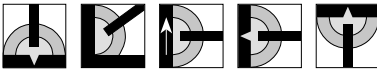
### Mechanical Properties

ISO- V J RT	60
Tensile Strength N/mm <sup>2</sup>	600
Elongation %	>35

### Chemical Composition

C	Si	Mn	Cr	Ni	Mo	S	P
0.03	0.90	0.90	23.80	12.80	0.10	0.012	0.020

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vaccum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7442S</b>	2.5mm	350mm	60-80
<b>7443S</b>	3.2mm	350mm	80-120
<b>7444S</b>	4.0mm	350mm	110-150

## Super Optimal 309 MOL-17

### Features and Applications

- Low carbon Rutile-basic coated 23Cr 12Ni 2Mo stainless steel type electrode, used to weld on AISI 309 & 316L stainless steels and for dissimilar joints between construction, mild steels and stainless steels. Intermediate layer for a 316 L type cladding.

### Standards

AWS A 5.4 : E 309 LMO- 17  
 DIN 8556 : E 23 13 2 LR 23  
 EN 1600 : E 23 13 2 LR 12

### Mechanical Properties

ISO- V J RT	65
Tensile Strength N/mm <sup>2</sup>	600
Elongation %	35

### Chemical Composition

C	Si	Mn	Cr	Ni	Mo	S	P
0.03	0.90	1.00	23.50	13.10	2.50	0.012	0.015

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vaccum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7446S</b>	2.5mm	350mm	50-80
<b>7447S</b>	3.2mm	350mm	80-110
<b>7448S</b>	4.0mm	350mm	100-140

## Super Optimal 316-17

### Features and Applications

- Rutile-silica-coated Mo containing austenitic stainless steel electrode with approx 6-8% ferrite. Coating with very low moisture pick-up. Soft fusion, without spatters, very easy slag removal, exceptional bead appearance, easy restriking.

### Standards

AWS A 5.4 : E 316- 17  
 DIN 8556 : E 19 12 3 R 23  
 EN 1600 : E 19 12 3 R 32

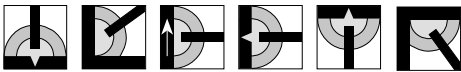
### Mechanical Properties

ISO- V J RT	60
Tensile Strength N/mm <sup>2</sup>	590
Elongation %	38

### Chemical Composition

C	Si	Mn	Cr	Ni	Mo	S	P
0.04	0.90	0.80	18.50	11.60	2.30	0.015	0.025

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vaccum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7450S</b>	2.5mm	350mm	50-70
<b>7451S</b>	3.2mm	350mm	70-100
<b>7452S</b>	4.0mm	350mm	100-140

## Super Optimal 312-17

### Features and Applications

- Electrode for high strength joint welding and surfacings of similar and equal steels or cast steels, for joint welding tensile unalloyed steels, tempered and tool steels, high manganese steels, spring steels and joints between dissimilar steels with high alloyed stainless steels.

### Standards

AWS A5.4 : E 312-17

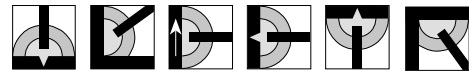
### Mechanical Properties

Yield Strength N/mm <sup>2</sup>	>500
Tensile Strength N/mm <sup>2</sup>	>800
Elongation %	>20

### Chemical Composition

C	Si	Mn	Cr	Ni	S	P
0.10	0.90	1.00	29.00	9.00	0.012	0.015

### Welding Positions



### Current Type

AC/DC (+)

### Manufacturer's Approvals

Approvals on request

### Product Information

2.0kg Vaccum Inner Pack with Plastic Tube / 10.0kg Master Pack

Part No.	Diameter	Length	Current
<b>7454S</b>	2.5mm	350mm	50-80
<b>7455S</b>	3.2mm	350mm	80-110
<b>7456S</b>	4.0mm	350mm	110-150



## CCMS

### Features and Applications

- An oxygen/acetylene copper coated mild steel rod for all types of mild steel and wrought iron welding
- Particularly suitable for welding sheet metal panels, plates and tubes

### Standards

AWS : A5.2 R45  
BS 1453 A1

### Mechanical Properties

Melting Point °C	1450
UTS N/mm <sup>2</sup>	350
Hardness BHN	120

### Chemical Composition

C	Si	Mn
0.07	0.10	0.40

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7460</b>	1.6mm
<b>7461</b>	2.4mm
<b>7462</b>	3.2mm

## Silicon Bronze C2

### Features and Applications

- A multi purpose silicon bronze brazing rod suited to all types of fabrication work involving steel, cast iron, copper and dissimilar metal joints. Use a general brazing flux for best results
- Automotive, wheelchair, tubular furniture and bicycle industries, repair and maintenance

### Standards

EN 1044 : CU 302  
BS 1845 CZ6A 1453 C2

### Mechanical Properties

Melting Point °C	875
UTS N/mm <sup>2</sup>	420
Hardness BHN	120

### Chemical Composition

Cu	Si	Sn	Zn
60.0	0.30	0.30	34.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

Pt No.	Diameter
<b>7468</b>	1.6mm
<b>7469</b>	2.4mm
<b>7470</b>	3.2mm

## Flux Coated Bronze C2FC

### Features and Applications

- Flux coated silicon bronze rod for continuous brazing through not having to flux dip the rod. Ideal for general mild steel, galvanised steel, dissimilar joints and DIY enthusiasts
- Automotive, tubular furniture, repair and maintenance DIY

### Standards

EN 1044 : Cu302  
BS 1845 CZ6A 1453 C2

### Mechanical Properties

Melting Point °C	875
UTS N/mm <sup>2</sup>	420
Hardness BHN	120

### Chemical Composition

Cu	Si	Sn	Zn
60.0	0.30	0.30	34.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube

**Pt No.** **Diameter**

**7473** 2.4mm

**7474** 3.2mm

## Bronze C2 K (Flux Impregnated)

### Features and Applications

- A flux impregnated silicon bronze rod which is perfect for brazing clean mild steel components and is ideally suited for use in motor body shops and sheet metal fabrications
- Automotive, sheet metal and tubular furniture manufacturers

### Standards

EN 1044 : Cu 302  
BS 1845 CZ 6A 1453 C2

### Mechanical Properties

Melting Point °C	875
UTS N/mm <sup>2</sup>	420
Hardness BHN	120

### Chemical Composition

Cu	Si	Sn	Zn
60.0	0.30	0.30	34.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

2.5kg Tube (500mm length)

**Pt No.** **Diameter**

**7476** 2.4mm

**7477** 3.2mm

## Bronze MN

### Features and Applications

- A brazing rod with additions of manganese and tin giving a free flowing characteristic. Use a general brazing flux or liquid gas flux
- Automotive, wheelchair, bicycle industries

### Standards

AWS : RB Cu Zn – C

### Mechanical Properties

Melting Point °C	870
UTS N/mm <sup>2</sup>	460
Hardness BHN	130

### Chemical Composition

<b>Cu</b>	<b>Fe</b>	<b>Si</b>	<b>Mn</b>	<b>Sn</b>	<b>Zn</b>
60.0	1.20	0.15	0.50	1.10	37.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7480</b>	1.5mm
<b>7481</b>	2.0mm
<b>7482</b>	2.5mm
<b>7483</b>	3.0mm

## Bronze C5

### Features and Applications

- Nickel bronze rod for use on cast iron, copper alloy, stainless steel and alloy steels. Gives excellent wearing properties and is ideal for structures requiring a high tensile strength. Use a general brazing flux or a stainless steel brazing flux
- Bicycle, tubular structures repair and maintenance

### Standards

EN 1044 : Cu 305  
BS : 1845 CZ8 1453 C5

### Mechanical Properties

Melting Point °C	950
UTS N/mm <sup>2</sup>	540
Hardness BHN	200

### Chemical Composition

<b>Cu</b>	<b>Si</b>	<b>Ni</b>	<b>Zn</b>
48.0	0.30	10.0	39.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

Pt No.	Diameter
<b>7485</b>	1.6mm
<b>7486</b>	2.4mm
<b>7487</b>	3.2mm

## Bronze C5 FC

### Features and Applications

- A flux coated nickel bronze for use on cast iron, copper alloys, stainless steel and alloy steel. The nickel content makes this rod ideal for joints requiring high strength
- Tubular structures, repair and maintenance

### Standards

EN 1044 : Cu 305  
BS : 1845 CZ 8 1453 C5

### Mechanical Properties

Melting Point °C	950
UTS N/mm <sup>2</sup>	540
Hardness BHN	200

### Chemical Composition

<b>Cu</b>	<b>Si</b>	<b>Ni</b>	<b>Zn</b>
48.0	0.30	10.0	39.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

5.0kg Tube

**Pt No. Diameter**

**7530** 2.5mm

**7531** 3.0mm

## CP2

### Features and Applications

- A copper phosphorous rod with 2% silver to give improved ductility and easier flowing characteristics. It is also highly resistant to corrosion. The rod is self fluxing on copper but a copper flux is required on brass joints
- Electric motors, hot water cylinders, copper/brass fabrication

### Standards

AWS : B Cu P – 6  
EN 1044 : CP105  
BS 1845 CP2

### Mechanical Properties

Melting Point °C	650
UTS N/mm <sup>2</sup>	420
Hardness BHN	190

### Chemical Composition

<b>Ag</b>	<b>P</b>	<b>Cu</b>
2.00	6.00	92.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

1.0kg Tube

**Pt No. Diameter**

**7537** 2.5mm

**7538** 3.0mm

## CP3

### Features and Applications

- A copper phosphorous rod with good electrical conductivity and corrosion resistance. It is self-fluxing on copper. A copper flux is required on brass joints
- Artistic foundries and general copper and brass fabrications

### Standards

AWS : B Cu P – 2  
EN 1044 : CP201  
BS : 1845 CP3

### Mechanical Properties

Melting Point °C	710
UTS N/mm <sup>2</sup>	500
Hardness BHN	200

### Chemical Composition

<b>P</b>	<b>CU</b>
7.00	93.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

1.0kg Tube

Pt No.	Diameter
<b>7533</b>	1.5mm
<b>7534</b>	2.5mm
<b>7535</b>	3.0mm

## CP4

### Features and Applications

- A copper phosphorous rod with 5% silver to give excellent flow and ductility (greater than CP2). The rod is self-fluxing on copper but a copper flux is required when joining brass
- General copper/brass fabrications

### Standards

AWS : B Cu P – 3  
EN 1044 : CP 104  
BS 1845 CP4

### Mechanical Properties

Melting Point °C	640
UTS N/mm <sup>2</sup>	600
Hardness BHN	190

### Chemical Composition

<b>Ag</b>	<b>P</b>	<b>Cu</b>
5.00	6.00	89.0

### Welding Positions



### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

1.0kg Tube

Pt No.	Diameter
<b>7499</b>	1.5mm
<b>7500</b>	2.5mm

## Silver AG28

### Features and Applications

- Cadmium-free 40% silver solder suitable for all ferrous and non ferrous metals except Aluminium and its alloys
- Artistic foundries, power generation, general copper/ brass fabrications

### Standards

AWS : A5.8-92 B Ag-28  
EN 1044 Ag 105

### Mechanical Properties

Melting Point °C	640
UTS N/mm <sup>2</sup>	440
Hardness BHN	130

### Chemical Composition

Ag	Cu	Zn	Sn
40.0	30.0	28.0	2.00

### Welding Positions

### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

0.25kg Tube		1.0kg Tube	
Pt No.	Diameter	Pt No.	Diameter
<b>7503</b>	1.5mm	<b>7505</b>	1.5mm
<b>7504</b>	2.5mm	<b>7506</b>	2.5mm

## Silver AG14

### Features and Applications

- Cadmium-free 55% silver solder which is free flowing and ideal for close fitting capillary joints. It gives a good colour match on stainless steel
- Artistic foundries, food industry, power generation

### Standards

AWS : A5.8 Bag 7  
EN 1044 AG103  
BS 1845 AG14

### Mechanical Properties

Melting Point °C	630
UTS N/mm <sup>2</sup>	415
Hardness BHN	145

### Chemical Composition

Ag	Cu	Zn	Sn
55.0	21.0	22.0	2.00

### Welding Positions

### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

0.25kg Tube		1.0kg Tube	
Pt No.	Diameter	Pt No.	Diameter
<b>7515</b>	1.5mm	<b>7508</b>	1.5mm
<b>7516</b>	2.5mm	<b>7509</b>	2.5mm

## Silver AG14 FC

### Features and Applications

- Cadmium free 55% flux coated silver solder
- Artistic foundries, food industry, power generation

### Standards

AWS : A5.8 Bag 7  
EN 1044 AG103  
BS 1845 AG 14

### Mechanical Properties

Melting Point °C	630
UTS N/mm <sup>2</sup>	415
Hardness BHN	145

### Chemical Composition

Ag	Cu	Zn	Sn
55.0	21.0	22.0	2.00

### Welding Positions

### Current Type

### Recommended Gas

Oxygen/Acetylene

### Manufacturer's Approvals

Approvals on request

### Product Information

0.25kg Tube		1.0kg Tube	
Pt No.	Diameter	Pt No.	Diameter
<b>7517</b>	1.5mm	<b>7511</b>	1.5mm
<b>7518</b>	2.5mm	<b>7512</b>	2.5mm

## Visit

Mig, Tig & Plasma sections for a wide range of Torches and Consumables

Arc Welding Accessories for Electrode Holders, Clamps, Connectors and other MMA accessories – plus Ovens and Quivers

Gas Welding for all you need from Regulators, Nozzles, Hoses and Fittings to Cutting Equipment

Safety & PPE for Welding Helmets and PAPR plus a comprehensive range of quality products to protect your Hearing, Head, Face, Eyes, Hands, Respiratory and Clothing

Welding Tools sections comprising all you need from Jacks, Clamps, Accessories and Kits to Fit Up and Magnetic Tools

Air & Cordless Tools including Compressors, Hand Tools, Kits and Accessories

## Pastes

- 1669**  
Standard Pickling Paste – 2.0kg (4 per case)\*
- 1670**  
Rapid Pickling Paste – 2.0kg (4 per case)\*
- 1671**  
Neutralisation Paste – 2.0kg (4 per case)\*

\*MOQ due to delivery restrictions



## Polinox-P Rapid Pickling Paste

Pickling ensures the corrosion resistance of components made of stainless steel increases considerably their service life and usefulness.

Made in the EU and free from hydrochloric acid and chlorides, the Polinox-P Rapid pickling paste is a high strength orange pickling paste which quickly and completely removes heavy scale and burring from high alloy materials.

- ZY070602**  
Polinox-P Rapid Pickling Paste  
2.0kg (4 per case)\*



## Flux Powder



- 7520**  
Aluminium Welding – 500g  
*Powder Flux for gas welding Aluminium*
- 7521**  
Aluminium Brazing – 500g  
*Powder Flux for gas brazing Aluminium and its alloys*
- 7522**  
General Brazing – 500g  
*Powder Flux for gas brazing steel and cast iron*
- 7523**  
Copper Welding and Brazing – 500g  
*Powder Flux for welding and brazing copper and its alloys*
- 7524**  
Silver Solder – 500g  
*Powder Flux (boric acid and borates free) for silver solder operations*

## Brushes

- 983**  
Pickling Paste Brush





## Premium Anti-Spatter Sprays

**CONTAINS 'THE WORKS'**



**1362**  
Premium Anti-Spatter Spray – 300ml  
Case of 12



**1394**  
Cleanweld Anti-Spatter Spray – 600ml  
Case of 12

**SOLVENT FREE**



**1357**  
Anti-Spatter Spray – 300ml  
Case of 12

**SILICONE FREE**



**1358**  
Anti-Spatter Spray – 300ml  
Case of 12

## Water Based Anti-Spatter

**1365**  
5 litres  
Case of 4

**1366**  
25 litres  
Qty 1



## Crack Detector/Metal Working Sprays



Item	Part No.	Description	Case Qty
①	<b>1800</b>	Crack Detector Penetrant – 300ml	12
②	<b>1801</b>	Crack Detector Developer – 300ml	12
③	<b>1802</b>	Crack Detector Cleaner – 300ml	12
④	<b>1803</b>	Leak Detector – 300ml	12
⑤	<b>1807</b>	Tapping and Cutting Oil – 300ml	12
⑥	<b>1808</b>	Galvanising Spray – 300ml	12
⑦	<b>1809</b>	Safe Solvent Cleaner – 300ml	12

## Tip Dip

**1490**  
Anti-spatter paste – 500g  
For MIG and TIG welding torch protection and weld spatter minimisation.



**Corten** Excellent resistance to atmospheric agents thanks to the presence of Cu, Cr, Ni. Suitable for bridges, cranes, ground moving machinery, boilers, building structures petrochemical sector, fans, gas pipes, fume suction etc.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)
ER80-S-G	A5.28	EN ISO 1431-A-G 50 4 C1/M21 Z3Ni1	<b>7800</b> – 1.0mm <b>7801</b> – 1.2mm

**NiCrMo-3** Ni-based solid wire for SAW welding. Corrosion and heat resistant. For welding of high alloyed steels, heat resistant steels, corrosion resistant steels, 9% Ni-steels and similar steels with high toughness at low temperatures. NiCrMo-3 shall be combined with Flux 10.90 or Flux 10.16.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)	TIG (5.0kg Tube)
ERNiCrMo-3	A5.14	NiCr22Mo9Nb / S Ni 6625	<b>7803</b> – 1.0mm <b>7804</b> – 1.2mm	<b>7805</b> – 2.4mm

**NiCrMo-4** is a corrosion and heat resistant, nickel-chromium wire welding of high alloyed steel, heat resistant steel, corrosion resistant steel, 9Ni steels and similar steels with high toughness at low temperatures. Good resistance to stress.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)	TIG (5.0kg Tube)
ERNiCrMo-4	A5.14	NiCr15Mo16Fe6W4 / S Ni 6276	<b>7806</b> – 1.0mm <b>7807</b> – 1.2mm	<b>7808</b> – 2.4mm

**NiCrMo13** Bare Ni-Cr-Mo wire for welding of high alloyed Ni-base materials, 9% Ni steel and super austenitic steels of type 20Cr-25Ni with 4-6% Mo. Can also be used for welding carbon steel to Ni base steel. The weld metal has a very good toughness and is corrosion resistant over a wide range of applications in oxidizing and reducing media.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)	TIG (5.0kg Tube)
ERNiCrMo13	A5.14	RNiCr23Mo-16 / S Ni 6059	<b>7809</b> – 1.0mm <b>7810</b> – 1.2mm	<b>7811</b> – 2.4mm

**NiCu-7** Bare nickel based welding wire alloyed with 30% Cu for welding of base materials of the same type. Can also be used to join these alloys to steel. The weld metal has good resistance to flowing seawater and has high strength and toughness over a rather wide temperature range. Has also good resistance to hydrofluoric acid, sulfuric acid, alkalis etc. Can be used for welding of similar types of base materials which are age-hardenable with small additions of Ti and Al.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)	TIG (5.0kg Tube)
ERNiCu-7	A5.14	NiCu30Mn3Ti / S Ni 4060	<b>7812</b> – 1.0mm <b>7813</b> – 1.2mm	<b>7814</b> – 2.4mm

**NiFe-CI** A nickel-iron electrode for welding normal grades of cast iron and for joining them to steel. Can be used for malleable modular cast iron and alloy cast iron. It has a special iron jacketed Ni core wire, which gives the wire much improved current carrying capacity compared to electrodes with a homogeneous core wire. The electrode produces a weld metal stronger and more resistant to solidification cracking than the pure nickel electrode types. Typical applications are repair of pump bodies, heavy machine sections, gear teeth, flanges and pulleys.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)	TIG (5.0kg Tube)
ERNiFe-CI	A5.14	NiFe-1	<b>7815</b> – 1.0mm <b>7816</b> – 1.2mm	<b>7817</b> – 2.4mm

**2209** Bare, corrosion-resistant, duplex welding wire for welding austenitic-ferritic stainless alloys of the 22% Cr, 5% Ni, 3% Mo types. 2209 has high general corrosion resistance. In media containing chloride and hydrogen sulphide, the alloy has high resistance to intergranular corrosion, pitting and especially to stress corrosion. The alloy is used in a variety of applications across all industrial sectors.

ALLOY	AWS	GRADE	MIG (15.0kg Spool)	TIG (5.0kg Tube)
ER2209	AWS A5.9	22 9 3 N L	<b>7818</b> – 1.0mm <b>7819</b> – 1.2mm	<b>7820</b> – 2.4mm