PRODUCT GUIDE
Welding Wires & Brazing

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SOLUTION FOR A PERFECT WELD

Westbrook Welding Alloys

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WELDING - BRAZING

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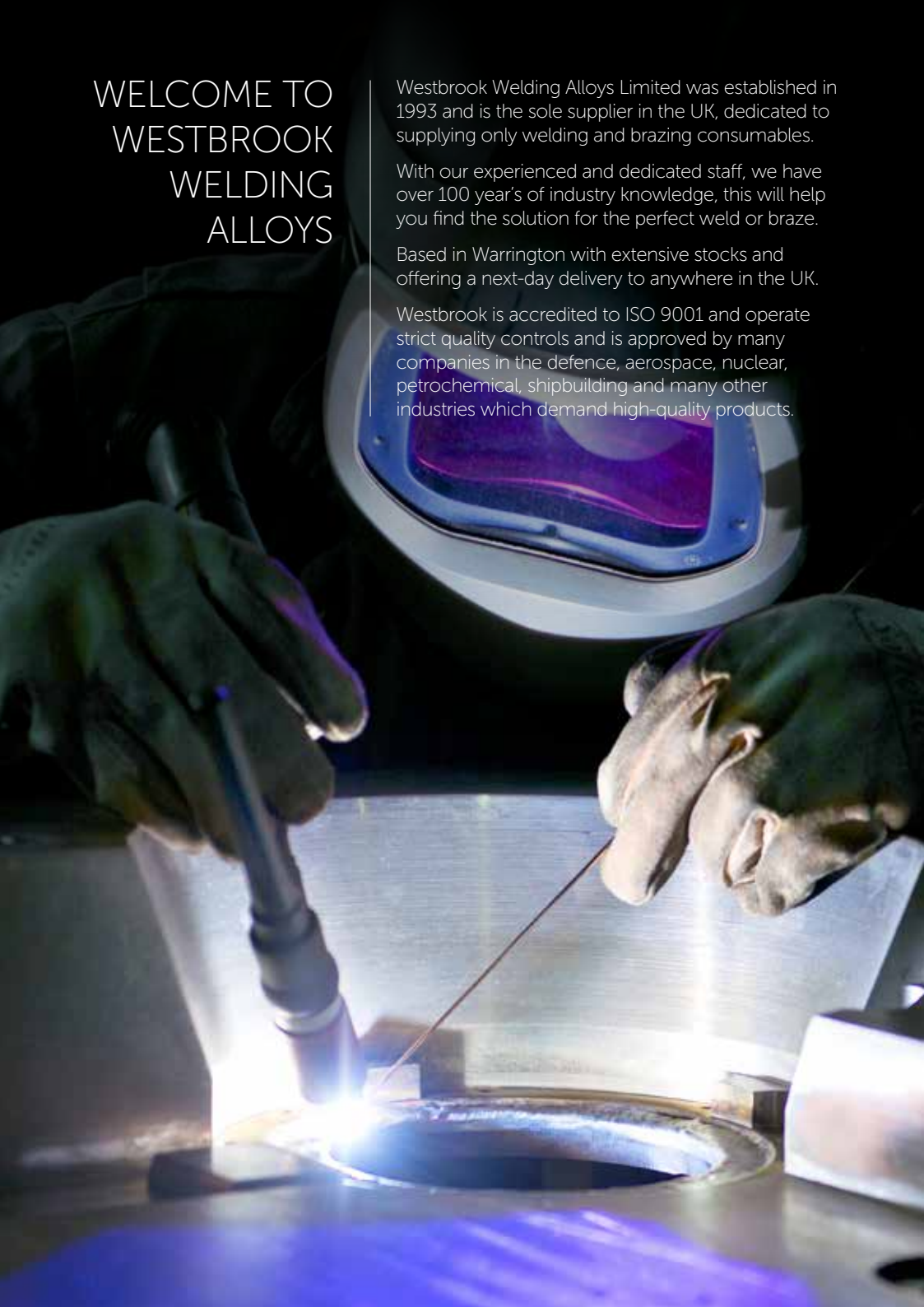

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Please note the table below is for guidance purposes only.

General Guide when welding MIG/TIG wires:

Wire Type	MIG - Shielding Gas*	TIG - Shielding Gas & Electrode Type*	
Stainless Steel	Argon+Oxygen 1% or 2%	Argon	Thoriated 2% or Ceriated
Stainless Flux-Cored	Argon+Carbon Dioxide 20%	-	
Nickel Alloys	Argon or Argon+Helium	Argon	Thoriated 2% or Ceriated
Aluminium	Argon	Argon	Zirconiated (a.c.+ HF)
Copper Alloys	Argon or Argon+Helium	Argon or Argon+Helium	Thoriated 2% or Ceriated
Aluminium Bronze	Argon	Argon	Thoriated or Zirconiated (a.c.+ HF)
Chrome-Moly	Argon+ 5% or 20% Carbon Dioxide	Argon	Thoriated 2% or Ceriated
Hardsurfacing	Argon+ 5% or 20% Carbon Dioxide	Argon	Thoriated 2% or Ceriated
Mild Steel	Argon+ 5% or 20% Carbon Dioxide	Argon	Thoriated 2% or Ceriated

*Other proprietary gas mixtures may be used with many of the wire types shown.

Un-alloyed Steels

AWS A5.20: ER45
BS 1453 A1

MS-A1

DESCRIPTION & APPLICATION

General purpose low carbon steel rod for the gas welding of Mild steel and Wrought iron. Widely used in the Automobile, Heating & Ventilation Industries.

BASE MATERIALS

Mild Steel piping, Boiler Plate
BS 4360

MECHANICAL PROPERTIES

>520	>420	25	~80
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -20°C

METAL WELD COMPOSITION %

C	Mn	Ni	Fe
0.1	0.6	0.25 Max	BAL

PACKAGING

5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Oxy-acetylene, neutral flame.

MS-A15

DESCRIPTION & APPLICATION

Triple Deoxidised, copper coated TIG Filler Wire for the joining of Mild Steel. Ideal for root runs in Pipework and thick walled material.

BASE MATERIALS

Mild Steel piping, Boiler Plate BS 4360

MECHANICAL PROPERTIES

>520	>420	25	~80
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J) -20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Fe
0.05	0.6	1.1	0.12	BAL

PACKAGING

5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

100% Argon

AWS A5.18: ER70S-6
EN ISO 636 W3Si1

MS-A18

DESCRIPTION & APPLICATION

Double Deoxidised, copper coated TIG/MIG Filler Wire for the joining of Mild Steel. Ideal for root runs in Pipework and thick walled material.

BASE MATERIALS

Mild Steel piping, Boiler Plate BS4360.

MECHANICAL PROPERTIES

>550	>450	25	~55
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J) -20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Fe
0.08	0.9	1.5	0.03	BAL

PACKAGING

5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

100% Argon (TIG)

Low Alloyed Steels

TIG/MIG Filler Wire
CrMo Steels

AWS A5.28: ER80S-G
BS 2901 Pt1: A32 (Obs.)
DIN 8575 W/MSG CrMo-1

CMW-1900

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the joining or overlay of 1.25%/0.25% CrMo steels
Can be used also for the reclamation of Plastic mould steels such as BS P20.

BASE MATERIALS

BS EN 10083-1, 708M20, 708H20 EN 19A
ASTM A387-90a GRADE 11, 12
ASTM A335-92b, GRADE P11
BS BP 20 Mould Steel

MECHANICAL PROPERTIES

550	560	19	-
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

C	Si	Mn	Cr	S	P	Mo	Fe
0.11	0.75	0.4	1.25	0.02	0.02	0.5	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)
0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material.

AWS A5.28: ER80S-D2
BS 2901 Pt1: A31 (Obs.)
BS EN 440 1994 G4Mo

TIG/MIG Filler Wire
MnMo Steels

CMW-1910

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the joining or overlay of Creep resistant Manganese Moly steels operating at elevated temperature (~500°C). Typical applications include the welding of pressure vessels and assorted pipe-work, and the joining of high-strength steels.

BASE MATERIALS

BS EN 10028-2- 15Mo3,16Mo3,
BS 970 Pt 3 605/606M36,
BS 1501-2 Grade 243B

Werkstoffe No 1.5415

MECHANICAL PROPERTIES

670	560	~22	~50
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J)-20°C

METAL WELD COMPOSITION %

C	Si	Mn	S	P	Mo	Fe
0.1	0.75	1.8	0.02	0.02	0.5	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)
0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material. For welding high strength steels, PWHT or controlled cooling, may be required to maintain mechanical values.

TIG/MIG Filler Wire
2CrMo Steels

AWS A5.28: ER90S-G
BS 2901 Pt1: A33 (Obs.)
BS EN 12070 1999 CrMo-2Si

CMW-1920

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the joining or overlay of 2.5%/1% CrMo creep resisting steels.

BASE MATERIALS

DIN 17155, 17254 10CrM)9.10-10CrSiMOV7
24 Cr Mo V55-12CrMo9.10, GS 12 Cr Mo 9.10
BS 1501. Gr622 –1504 Gr622, BS 359 Gr622/640, 1503 Gr660, 1504 Gr660
ASTM A387 GrD-A335 GrP22 –A213 GrT22,T36

MECHANICAL PROPERTIES

580	470	23	-
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

C	Si	Mn	Cr	S	P	Mo	Fe
0.06	0.7	1.1	2.5	0.02	0.02	1.0	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)
0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material.

AWS A5.29: ER502
BS 2901 Pt1: A34~ (Obs.)

TIG/MIG Filler Wire
5CrMo Steels

CMW-1930

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the joining of 5 CrMo High Temperature Steels and steels for hot hydrogen service particularly in oil refineries. Service temperature up to 600°C.

BASE MATERIALS

K.R : 12 CrMo 19 5 W/No. 1.7362
G.GS-12CrMo 19.5 W/No. 1.7363
AISI/ASTM A213, A217 Gr C5, A335 Gr P5

MECHANICAL PROPERTIES

620	495	25	200
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J) 920°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	S	P	Mo	Fe
0.08	0.4	0.5	5.8	0.02	0.02	0.6	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)
0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material. (300-350°C). Maintain interpass temp at that level. Temper at 730-760°C for 1hour followed by cooling in furnace/air.

TIG/MIG Filler Wire
C/Mo Steels

AWS A5.28: ER70S-A1
DIN 8575 W/MSG Mo
BS EN ISO-14341 2008 G2Mo

CMW-1940

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the joining or overlay of Carbon/Moly steels such as 0.5% Molybdenum Steel used for creep resistant service up to 500°C.

BASE MATERIALS

BS 1504 Gr 245 BS 3059 Gr B1,Gr 243 BS 3606 Gr 243, 245, 261
ASTM A336, A335, A185
Din 17Mn4, 19Mn6, 15Mo3, GS-22Mo4

MECHANICAL PROPERTIES

550	460	25	100
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J)-20°C

METAL WELD COMPOSITION %

C	Si	Mn	S	P	Mo	Cu	Fe
0.1	0.5	1.2	0.01	0.015	0.5	0.05	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)
0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material.

AWS A5.9/A5.28: ER90S-B8
BS 2901 Pt1: A35(obs)~

TIG/MIG Filler Wire
9Cr/Mo Steels with other Chrome Moly

CMW-1990

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the joining or overlay of 9% Chrome/Moly steels such as used for creep resistant service up to 500°C. Offers corrosion resistance to steam, hot hydrogen gases and high sulphur content crude oil.

BASE MATERIALS

BS 1504 Gr 629 BS 3100 B6 (cast)
ASTM A336, A335, A199, A200, A213 Gr T9
Din 1.7368, 1.7386, 1.7388, 1.7389

MECHANICAL PROPERTIES

>600	>500	>20	>40
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J) 20°C

METAL WELD COMPOSITION %

C	Si	Mn	S	P	Cr	Mo	Fe
0.07	0.3	0.5	0.01	0.015	9.0	0.9	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)
0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material.

Solid wire
Welding of Low Temperature Steel

MS-A801

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the joining of Steel operating at low temperatures. Excellent impact values at -50°C Improved resistance to preferential corrosion, therefore ideal for welding rebar and ties in external applications.

BASE MATERIALS

BS 4360 WR50A-WR50C
ASTM A588 grades A,B,C,K, A333 Grades 1, 4, 6, 10
Din. 1.8960, 1.8961, 1.8963

MECHANICAL PROPERTIES

>610	>525	25	~45
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J) -20°C

METAL WELD COMPOSITION %

C	Si	Mn	Ni	Cr	Fe
0.12	0.6	1.15	0.9	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

MIG Shielding Gas 5% or 20% CO_2 in Argon or proprietory mix. TIG 100% Argon.

MS-A801Cu

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the joining of weathering steels such as Corten A.
Applications include Architectural structures, Bridges and Exhaust Gas Flues.
The weld metal also exhibits improved resistance to preferential corrosion in sea-water particularly those rich in oxygen such as Arctic.

BASE MATERIALS

BS 4360 WR50A-WR50C
Corten A, Patinax

ASTM A588 grades A,B,C,K
Din 1.8960, 1.8961, 1.8963

MECHANICAL PROPERTIES

>620	>520	25	60
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J) -20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cu	Ni	Cr	Fe
0.08	0.8	1.4	0.4	0.8	0.12	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

MIG Shielding Gas 5% or 20% CO_2 in Argon or proprietory mix. TIG 100% Argon
Note: The designation sufffix–G indicates an agreement between a manufacturer and an end user, due to the fact that the wire in question does not exactly meet the requirements of a standard specification, e.g –D2. It does, however, mean that wires with this designation from various manufacturers can have variable chemical compositions.

AWS A5.28: ER80S-Ni2
EN 440 46 5 M G2Ni2

MS-A802

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the joining of Steel operating at low temperatures. Excellent impact values at -50°C Improved resistance to preferential corrosion therefore ideal for welding rebar and ties in external applications.

BASE MATERIALS

BS 4360 WR50A-WR50C
ASTM A588 grades A,B,C,K

Din. 1.8960, 1.8961, 1.8963

MECHANICAL PROPERTIES

>630	>540	>25	>60
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J) -20°C

METAL WELD COMPOSITION %

C	Si	Mn	Ni	Cu	Fe
0.1	0.6	1.1	2.3	0.2	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

MIG Shielding Gas 5% or 20% CO_2 in Argon or proprietory mix. TIG 100% Argon.

MS-100/110S-G

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the joining of Fine Grain Steel, rolled, quenched and tempered steel, concrete reinforcing bars, (rebar) High strength low alloy steel tubing. Excellent impact values at sub-zero temperatures.

BASE MATERIALS

BS 4360 WR50A-WR50C. BS 'T' standard Tubing, e.g. T45
ASTM A588 grades A, B, C, K

RQT 701
Din. 1.8960, 1.8961, 1.8963

MECHANICAL PROPERTIES

>790	>700	18	>60
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J) -20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cu	Mo	Ni	Cr	Fe
0.09	0.6	1.4	0.02	0.25	1.3	0.3	BAL

PACKAGING

15kg and 20kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

MIG Shielding Gas 5% or 20% CO_2 in Argon or proprietory mix. TIG 100% Argon. Preheat as per the requirements of the base material. Do not overheat. Allow to cool slowly.

Filler Wires for Joining Similar/Dissimilar Grades Of Stainless Steels

Line 1: First Choice **Line 2:** Second Choice **Line 3:** Third Choice **Line 4:** Fourth Choice

Please note the table below is for guidance purposes only.

Base Material	301	302/B	303/Se	304H	304/L	309/S	310/S	316H	316/L	317/L	321 347	410	420	430
430	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-309 SW-309L - -	SW-309 SW-309L - -	SW-316H SW-309L - -	SW-316L SW-309L - -	SW-316L SW-309L - -	SW-347 SW-309L - -	SW-430 SW-308L - -	SW-430 SW-308L - -	SW-430 SW-308L - - 1 2 3 4
420	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-309 SW-309L - -	SW-309 SW-309L - -	SW-316H SW-309L - -	SW-316L SW-309L - -	SW-316L SW-309L - -	SW-347 SW-309L - -	SW-420 SW-308L - -	SW-420 SW-308L - - 1 2 3 4	
410	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-308L SW-309L - -	SW-309 SW-309L - -	SW-309 SW-309L - -	SW-316H SW-309L - -	SW-316L SW-309L - -	SW-316L SW-309L - -	SW-347 SW-309L - -	SW-410 SW-308L - - 1 2 3 4		
321 347	SW-347 SW-308L - -	SW-347 SW-308L - -	SW-347 SW-308L - -	SW-347 SW-308L - -	SW-347 SW-308L - -	SW-347 SW-309 SW-309L -	SW-310 SW-347 - -	SW-316L SW-308H SW-347 -	SW-316L SW-347 - -	SW-316L SW-347 - -	SW-347 SW-308L - - 1 2 3 4			
317/L	SW-317 SW-308L - -	SW-317 SW-308L - -	SW-317 SW-308L - -	SW-317 SW-308L - -	SW-317 SW-308L - -	SW-316L SW-309L - -	SW-310 SW-317L - -	SW-317 SW-316L - -	SW-317 SW-316L - -	SW-317L - - - 1 2 3 4				
316/L	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-309L SW-316L - -	SW-310 SW-316L - -	SW-316L SW-316H - -	SW-316 SW-316LSi - - 1 2 3 4					
316H	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-316H SW-308L - -	SW-309 SW-316H - -	SW-310 SW-316H - -	SW-316H - - - 1 2 3 4						
310/S	SW-310 SW-308L - -	SW-310 SW-308L - -	SW-312 - - -	SW-310 SW-308H - -	SW-310 SW-308L - -	SW-310 SW-309 - -	SW-310 - - - 1 2 3 4							
309/S	SW-309 SW-309L SW-309LSi -	SW-309 SW-309L SW-309LSi -	SW-309 SW-309L SW-309LSi -	SW-309 SW-309L SW-309LSi -	SW-309 SW-309L SW-309LSi -	SW-309 SW-309L SW-309LSi - 1 2 3 4								
304/L	SW-308L SW-308LSi - -	SW-308L SW-308LSi - -	SW-308L SW-308LSi - -	SW-308L SW-308LSi - -	SW-308L SW-308LSi - - 1 2 3 4									
304H	SW-308L SW-308LSi - -	SW-308L SW-308LSi - -	SW-308L SW-308LSi - -	SW-308H - - - 1 2 3 4										
303/Se	SW-308L SW-308LSi - -	SW-308L SW-308LSi - -	SW-312 - - - 1 2 3 4											
302/B	SW-308L SW-308LSi - -	SW-308 SW-308L SW-308LSi - 1 2 3 4												
301	SW-308 SW-308L SW-308LSi - 1 2 3 4													

If you need any help or technical advice, please contact our dedicated sales team on:

01925 839983

sales@westbrookwelding.co.uk

Discover all our specification sheets to help you more:
westbrookwelding.co.uk/**downloads**

Stainless Steels

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER316L
ISO14343-A-2009 19 12 3 L

SW-316L

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition. Joining of all Austenitic Stainless. Used in the food and Dairy Industry Austenitic deposit with up to 12% Ferrite, slightly magnetic.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, particularly Molybdenum bearing.

MECHANICAL PROPERTIES

~600	>420	>30	140-200
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.015	0.45	1.8	18.5	11.5	2.6	0.02	0.025	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
0.8, 1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG 5% or 20% CO_2 in Argon, or 2% Argon-Ox. TIG 100% Argon. Do not allow the base material to overheat, maintain interpass temperature below 150°C.

AWS A5.9: ER316LSi
ISO 14343-A-2009 19 12 3 LSi

Stainless Steel Solid Wire
MIG/TIG Welding

SW-316LSi

DESCRIPTION & APPLICATION

Solid MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition, (Moly-bearing) such as found in the Food/Drink Industry. Essentially Austenitic, with up to 13% Ferrite, making the deposit slightly magnetic. Increased silicon content for more fluid deposit over 316L.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, particularly 316 and 316L, Railway and Crane Tracking, Wear Plates, Buffer layer on Austenitic Manganese or high carbon/high manganese steel prior to hard facing.

MECHANICAL PROPERTIES

~600	~470	~35	140
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) 20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.01	0.85	1.95	18.5	12	2.50	0.01	0.015	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2, 1.6mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-Ox, TIG 100% Argon
Do not allow the base material to overheat.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER308L
ISO 14343-A-2009 19 9 L

SW-308L

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition such as AISI 304L. Low carbon content minimises Carbide precipitation.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, Overlay of Mild Steel (Cladding)
Joining of Austenitic Manganese Steels (Hadfields).

MECHANICAL PROPERTIES

~600n/mm	>380	>35	>40
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.012	0.4	1.9	19.5	10.5	0.05	0.002	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
0.8, 1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-Ox (MIG). 100% Argon (TIG). Do not allow the base material to overheat, maintain interpass temperature below 150°C.

AWS A5.9: ER308LSi
ISO 14343-A-2009 19 9 LSi

Stainless Steel Solid Wire
MIG/TIG Welding

SW-308LSi

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition such as AISI 304L Low carbon content minimises Carbide precipitation. Higher silicon content than 308L gives increased fluidity.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, particularly 304, overlay of Mild Steel (Cladding) Joining of Austenitic Manganese Steels (Hadfields).

MECHANICAL PROPERTIES

~600	~380	>35	>35
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.012	0.85	1.9	19.5	10.5	0.05	0.002	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-Ox (MIG). 100% Argon (TIG). Do not allow the base material to overheat, maintain interpass temperature below 150°C.

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER307
EN 14343 – A - 18 8 Mn

SW-307

DESCRIPTION & APPLICATION

Stainless Steel MIG/TIG Filler wire with a significant amount of Manganese, making the deposit fully Austenitic. Joining of Austenitic Stainless to Carbon Steels as well as 14% Manganese. Used to join Wear Plates and as a Buffer layer under hard surfacing. Fully Austenitic deposit, non-magnetic with high ductility.

BASE MATERIALS

All 300 series Austenitic Stainless Steels, 14% Manganese Steel, Railway and Crane Tracking, Wear Plates, Buffer layer on Manganese or high carbon/high manganese steel prior to hard facing.

MECHANICAL PROPERTIES

~650	~450	>38	120
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J) 20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.15	0.95	6.5	19.5	9.0	0.3	0.02	0.025	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2, 1.6mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-OxTIG. Do not allow the base material to overheat, particularly when welding Manganese Steel.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.9: ER307~
ISO 14343 –A-2009 18 8 Mn~

Stainless Steel Solid Wire
MIG Welding

SW-307Si

DESCRIPTION & APPLICATION

MIG Filler wire for the joining and overlay of Stainless Steels of similar composition. Joining of all Austenitic Stainless as well as 14% Manganese. Used to join Wear Plates and as a buffer layer under hard surfacing. Fully Austenitic deposit, non-magnetic with high ductility. Increased Silicon content compared with standard, gives more fluid deposit.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, 14% Manganese Steel, Railway and Crane Tracking, Wear Plates, Buffer layer on manganese or high carbon/high manganese steel prior to hard facing.

MECHANICAL PROPERTIES

~650n/mm	>460	~30	140-200
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.15	0.95	7.0	18.5	8.5	0.3	0.02	0.025	BAL

PACKAGING

15kg Spools (MIG)

DIAMETERS

0.8, 1.0, 1.2, 1.6mm (MIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% in Argon, or 2% Argon-Ox. Do not allow the base material to overheat, particularly when welding Manganese Steel.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER430
ISO 14343-A 2009 17

SW-430

DESCRIPTION & APPLICATION

Ferritic Stainless Steel Filler wire for the joining and overlay of Stainless Steels of similar composition. Used for the welding of Exhaust components, casting reclamation and fabrication of pipework used in automotive, paper and chemical process plant.

BASE MATERIALS

Ferritic Stainless Steel of similar composition, such as Automotive Exhaust Systems ASTM 430, Din 1.4016, 1.4057, 1.4059.

MECHANICAL PROPERTIES

~530	~350	~24	~120
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.02	0.35	0.5	16.5	0.25	0.02	0.005	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Pure Argon (TIG), or 2% Argon-Ox (MIG). Do not allow the base material to overheat to prevent grain growth. Where PWHT is not practicable 430 can be welded with an austenitic wire such as 308L or 309L.

AWS A5.9: ER385
ISO 14343-A-2009 25 20 5 Cu L

Super Austenitic Solid Wire
MIG/TIG Welding

SW-904L

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition (904L). Due to its alloy composition, high Mo-content and Cu, the weld metal is suited against attacks by phosphoric and sulphuric acids, it shows a high resistance against pitting and stress corrosion in chloride containing media.

BASE MATERIALS

UNS S 31703. N 08904. Werkstoffe No. 1.4563, 1.4539.
Creusot Loire Uranus B28, B6, Sanicro 28.

MECHANICAL PROPERTIES

~650n/mm	>490	>35	>100 (ISO-V)
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J)-196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Cu	Fe
0.008	0.35	1.9	20	25	4.31	0.01	0.01	1.4	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG <3%, 2% Argon-Ox or proprietory special gas. TIG 100% Argon. Do not allow the base material to overheat, maintain interpass temperature below 150°C.

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER309
ISO 14343-A-2009 22 12 H

SW-309(H)

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition, such as AISI 309 castings. High carbon content for maximum strength and corrosion resistance.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, Overlay of Mild Steel (Cladding)
Joining of Austenitic Manganese Steels (Hadfields).

MECHANICAL PROPERTIES

~600n/mm	>380	>30	>40
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.08	0.4	1.6	23.5	13.5	0.05	0.002	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-Ox (MIG). 100% Argon (TIG). Do not allow the base material to overheat, maintain interpass temperature below 150°C.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.9: ER309Lsi
ISO 14343-A-2009-23 12 Lsi

Stainless Steel Solid Wire
MIG/TIG Welding

SW-309LSi

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition, such as AISI 309 castings. Low carbon content minimises Carbide precipitation. May also be used as a dissimilar consumable and for joining 3Cr12. Increased Silicon content over 309L for fluidity.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, Overlay of Mild Steel (Cladding) Joining of Austenitic Manganese Steels (Hadfields), 3Cr12 and for dissimilar applications.

MECHANICAL PROPERTIES

~600n/mm	>380	>30	>40
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.02	0.6	1.9	23.5	12.5	0.05	0.002	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-Ox (MIG). 100% Argon (TIG). Do not allow the base material to overheat, maintain interpass temperature below 150°C.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER309L
ISO14343-A-2009 23 12 L

SW-309L

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition, such as AISI 309 castings. Low carbon content minimises Carbide precipitation. May also be used as a dissimilar consumable and for joining 3Cr12.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, Overlay of Mild Steel (Cladding)
Joining of Austenitic Manganese Steels (Hadfields), 3Cr12 and for dissimilar applications.

MECHANICAL PROPERTIES

~600	>380	>30	>40
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.02	0.6	1.9	23.5	12.5	0.05	0.002	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% or 20% CO_2 in Argon, or 2% Argon-Ox (MIG). 100% Argon (TIG). Do not allow the base material to overheat, maintain interpass temperature below 150°C.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

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AWS A5.9: ER310
ISO 14343 2009 25 20

Stainless Steel Solid Wire
MIG/TIG Welding

SW-310

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition, such as AISI 310 castings. Fully Austenitic deposit makes it Non Magnetic. Resistant to scaling at temperatures up to 1050°C.

BASE MATERIALS

300 series Austenitic Stainless Steel, Overlay of Mild Steel (Cladding). Furnace and highly corrosive applications. UNS S31000, S31008, S31400. DIN Mat No 1.4841, 1.4845, 1.4840.

MECHANICAL PROPERTIES

~590n/mm	>390	>40	>60
UTS n/mm	YIELD 0.2%	ELONG A5%	CV (J) -196°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	S	P	Fe
0.11	0.4	1.6	25.0	20.5	0.002	0.02	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 5% CO_2 in Argon, or 2% Argon-Ox (MIG). 100% Argon (TIG). Do not allow the base material to overheat, maintain interpass temperature below 150°C.

Stainless Filler Wire
Dissimilar Steels

AWS A5.9: ER312
ISO 14343-A-2009 29 9

SW-312

DESCRIPTION & APPLICATION

Stainless Steel Filler Wire with a Duplex structure for the joining of dissimilar steels, low alloy steels to Stainless. Also used to provide a buffer layer on tooling prior to hard facing. Work Hardens to some degree. High resistance to impact. Can also be used for joining Wear Plates to mild steel support structures.

BASE MATERIALS

Mild and low alloy steels to stainless, tooling steels, such as D2, to provide isolating buffer layer prior to hard facing. Deposit can be used as a Wear facing, resistant to severe impact. Stainless Steel of a similar composition.

MECHANICAL PROPERTIES

700-850	>500	>20	~240
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo
0.10	1.0	0.6	29.0	9.0	0.5

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0 and 1.2 mm (MIG)
1.6, 2.4 and 3.2mm (TIG)

WELDING INSTRUCTIONS

Maintain interpass temperature below 250°C. Pre-heat as per the base material requirements. Shielding Gas TIG, 100% Ar or Argon/Helium. MIG, Argon/Ox, Argon/CO_2 or proprietory gas mix.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.9: ER316H
ISO14343-A-2009 19 12 3 H

Stainless Steel Solid Wire
MIG/TIG Welding

SW-316H

DESCRIPTION & APPLICATION

High Carbon MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition, i.e. 316H. Joining of most Austenitic Stainless. Used in the food and Dairy Industry and where higher strength than 316L is required.
Austenitic deposit with up to 10% Ferrite, slightly magnetic.

BASE MATERIALS

300 series Austenitic Stainless Steel, particularly Molybdenum bearing.

MECHANICAL PROPERTIES

>550n/mm	>420	>26	95
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J) +20

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.045	0.45	1.8	19.0	12.0	2.5	0.02	0.025	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG 5% or 20% CO_2 in Argon, or 2% Argon-Ox.
TIG 100% Argon. Do not allow the base material to overheat, maintain interpass temperature below 150°C. For MIG, use dip transfer as preferred method. Suggested welding parameters using Argon/5% CO_2. Amps 250, Volts 25. Using Argon/O_2 increase Voltage. Final settings to be at Welder preference.

Stainless Steel Solid Wire
MIG/TIG Welding

AWS A5.9: ER317L
ISO 14343-A-2009 18 15 3 L

SW-317L

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition. Joining of all Austenitic Stainless. Used in the food and Dairy Industry Austenitic deposit with up to 12% Ferrite, slightly magnetic.

BASE MATERIALS

300 series Austenitic Stainless Steels, particularly Molybdenum bearing. CG8M Castings.

MECHANICAL PROPERTIES

~630	~450	>30	>75
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J) 20°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.015	0.45	1.8	18.5	13.5	3.5	0.02	0.025	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG 5% or 20% CO_2 in Argon, or 2% Argon-Ox. TIG 100% Argon. Do not allow the base material to overheat, maintain interpass temperature below 150°C.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

SW-347(H)

DESCRIPTION & APPLICATION

Solid MIG/TIG Filler wire for the joining and overlay of Stabilized Stainless Steels of similar composition, Essentially Austenitic, with up to 12% Ferrite, making the deposit slightly magnetic. Stabilised with Niobium to overcome Titanium transfer problems in 321. Operating temperature range -196°C – 815°C.

BASE MATERIALS

All 300 series Austenitic Stainless Steel, particularly 321 and 347 (stabilized), Railway and Crane Tracking, Wear Plates, Buffer layer on Austenitic Manganese or high carbon/high manganese steel prior to hard facing.

MECHANICAL PROPERTIES

~660	~450	~35	150J
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J) -50°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe	Nb
0.04	0.45	1.38	20	9.5	0.2	0.01	0.015	BAL	0.6

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2, 1.6mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG 5% or 20% CO_2 in Argon, or 2% Argon-Ox TIG. Pure Argon or Argon/Helium mix. Do not allow the base material to overheat, particularly when welding 14% Manganese Steel.

For more details on welding of Stainless steel, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.9: ER420
ISO 14343-B-2009 420

SW-420

DESCRIPTION & APPLICATION

TIG Filler wire for the joining and overlay of Stainless Steels of similar composition (Straight Chrome) Martensitic deposit, which is hardenable. Higher carbon version of 410.

BASE MATERIALS

AISI 420
ASTM A743 Gr CA15

MECHANICAL PROPERTIES

~650n/mm	~450	-	300*
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

*As per heat treatment

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.4	0.35	0.5	13.0	0.3	0.1	0.02	0.025	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas TIG 100% Argon. Preheat to 200-300°C depending on component thickness and geometry, maintain interpass temperature above 150°C Slow cool in vermiculite or similar. Post Weld Heat Treat as per Hardness/Temper requirements.

SW-410

DESCRIPTION & APPLICATION

TIG Filler wire for the joining and overlay of Stainless Steels of similar composition (Straight Chrome) Martensitic deposit, which is heat treatable. Can be used to repair Plastic mould steels of similar composition.

BASE MATERIALS

AISI 410/420
ASTM A743 Gr CA15

MECHANICAL PROPERTIES

~650	>450	~18	300*
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

*As per heat treatment

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Fe
0.1	0.35	0.5	13	0.3	0.1	0.02	0.025	BAL

PACKAGING

5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas 100% Argon. Preheat to 200-300°C depending on component thickness and geometry, maintain interpass temperature above 150°C Slow cool in vermiculite or similar.

Duplex Solid Wire
MIG/TIG Welding

AWS A5.9: ER2209
EN ISO 14343 2009 22 9 3 N L

SW-4462

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition (Duplex). The analysis of the wire is overmatched with respect to the base material to ensure the correct microstructure when welded. Used in the fabrication of plate and pipework in the petro-chemical and offshore industry.

BASE MATERIALS

UNS 31803, J92205. Werkstoffe No. 1.4462
Hy-resist 22/5. Avesta 2205, Sandvik 2205, 2304
Creusot Uranus 45N

MECHANICAL PROPERTIES

~780	>580	>30	>120 (ISO-V)
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J)-50°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Cu	Fe
0.015	0.35	1.52	22.8	8.5	3	0.01	0.01	0.1	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG 5% or 20% CO_2 in Argon, 2% Argon-Ox or proprietory special gas. TIG 100% Argon. Do not allow the base material to overheat, maintain interpass temperature below 150°C.

AWS A5.9: ER2594
ISO 14343-A-2009 25 9 4 N L

Super Duplex Solid Wire
MIG/TIG Welding

SW-4501

DESCRIPTION & APPLICATION

MIG/TIG Filler wire for the joining and overlay of Stainless Steels of similar composition (Super Duplex). The analysis of the wire closely matches the base material to ensure the correct microstructure when welded. Used in the fabrication of plate and pipework in the Petro-chemical and Offshore industries. PREN >40.

BASE MATERIALS

Ferralium 255	Uranus 52N+
Sumitomo DP3	VDM FALC 100
Avesta 2507	Sandvik 2507

MECHANICAL PROPERTIES

~870	>690	>30	>130 (ISO-V)
UTS n/mm	YIELD 0.2%	ELONG A5%	IMPACT (J)-50°C

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	S	P	Cu	W	Fe
0.01	0.4	0.7	25	9.2	3.5	0.002	0.02	0.7	0.6	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding gas MIG 5% or 20% CO_2 in Argon, 2% Argon-Ox or proprietory special gas. TIG 100% Argon. Do not allow the base material to overheat, maintain interpass temperature below 150°C.

Filler Wires for Joining Nickel/Nickel Alloys and to Dissimilar Alloys

Line 1: First Choice **Line 2:** Second Choice **Line 3:** Third Choice **Line 4:** Fourth Choice

Please note the table below is for guidance purposes only.

Base Material	Nickel 200/201	Monel 400	Inconel 600	Inconel 625	Inconel 686	Incoloy 800/ 800H	Incoloy 825 & Super Aust.	Carbon Low Alloy & Ni Steels	3-30% Chromium Steels	Austenitic Stainless 300 Series	Duplex & Super Duplex	Copper Nickel
Copper Nickel	NW-1710 NW-1750 NW-1700 -	NW-1710 NW-1750 NW-1700 -	NW-1720 NW-1700 - -	NW-1740 NW-1720 NW-1700 -	NW-1759M NW-1740 NW-1700 -	NW-1720 NW-1700 - -	NW-1720 NW-1700 - -	NW-1710 NW-1720 NW-1700 -	NW-1720 NW-1700 - -	NW-1720 NW-1700 - -	NW-1759M NW-1720 - -	NW-1750 - - - 1 2 3 4
Duplex & Super Duplex	NW-1759M NW-1720 - -	NW-1740 NW-1720 - -	NW-1759M NW-1720 - -	NW-1759M NW-1740 - -	NW-1759M - - -	NW-1759M NW-1720 - -	NW-1759M NW-1740 - -	NW-1759M NW-1720 - -	NW-1759M NW-1740 NW-1720 -	NW-1759M NW-1720 - -	NW-1759M - - - 1 2 3 4	
Austenitic Stainless 300 Series	NW-1720 NW-1700 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1759M NW-1740 NW-1720 -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	See Stainless Chart	1 2 3 4	
3-30% Chromium Steels	NW-1720 NW-1700 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1759M NW-1740 NW-1720 -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 See Also Stainless Chart	1 2 3 4		
Carbon Low Alloy & Ni Steels	NW-1720 NW-1700 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1759M NW-1740 NW-1720 -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1720 See Also Mild/Alloy Wires	1 2 3 4			
Incoloy 825 & Super Aust.	NW-1720 NW-1700 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 - - -	NW-1759M NW-1740 - -	NW-1740 NW-1720 - -	NW-1740 NW-1759M - -	1 2 3 4				
Incoloy 800/ 800H	NW-1720 NW-1700 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1740 NW-1720 - -	NW-1759M NW-1740 NW-1720 -	NW-1740 NW-1720 - -	1 2 3 4					
Inconel 686	NW-1759M NW-1740 NW-1720 NW-1700	NW-1759M NW-1740 NW-1720 -	NW-1759M NW-1740 NW-1720 -	NW-1759M NW-1740 - -	NW-1759M - - -	1 2 3 4						
Inconel 625	NW-1740 NW-1720 NW-1700 -	NW-1740 NW-1720 NW-1700 -	NW-1740 NW-1720 - -	NW-1740 - - -	1 2 3 4							
Inconel 600	NW-1720 NW-1700 - -	NW-1740 NW-1720 - -	NW-1720 - - -	1 2 3 4								
Monel 400	NW-1710 NW-1700 - -	NW-1710 - - -	1 2 3 4									
Nickel 200/201	NW-1700 - - -	1 2 3 4										

If you need any help or technical advice, please contact our dedicated sales team on:

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In the following section, Nickel 200/201, Monel, Incoloy and Inconel are trademarks of **Inco Group of Companies.**

Discover all our specification sheets to help you more:
westbrookwelding.co.uk/**downloads**

Nickel Alloys

Nickel Filler Wire

AWS A5.14 ER Ni-1
BS 2901 Pt5: NA 32

NW-1700

DESCRIPTION & APPLICATION

Essentially pure Nickel Filler Wire for the joining and surfacing of Alloys of a similar composition, (Nickel 200,201) Also suitable for the joining of these Alloys to steel, Nickel Alloys, copper and copper alloys. Used in high-grade plant/engineering primarily for the Petro-chemical industry.

BASE MATERIALS

Nickel 200,201
Stainless Steel
CuNi Alloys, NiCu Alloys (Monel)

MECHANICAL PROPERTIES

>420	>280	>25	+20°C. >120 -196°C. >110
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J)

METAL WELD COMPOSITION %

C	Si	Mn	Ti	Ni	Fe
0.05	0.4	0.4	3.0	BAL	0.5

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

horough cleaning of the weld zone is paramount. 100% Argon gas for TIG applications, Argon/Helium or Argon for MIG or proprietory special gases. Prior to welding, all traces of paint, oil, grease or other sources of hydrocarbons to be removed.

AWS A5.14 ER NiCu-7
BS 2901 Pt5: NA 33

Nickel/Copper Alloy Filler Wire

NW-1710

DESCRIPTION & APPLICATION

Nickel/Copper Alloy Filler Wire for the joining and surfacing of Alloys of a similar composition, (Monel 400) Also suitable for the joining of these Alloys to steel, copper and other copper alloys. Used in high-grade plant/engineering primarily for the petro-chemical industry. A special application is the fabrication of seawater evaporation plant and marine equipment.

BASE MATERIALS

Monel 400, K-500. Nicorros, LC
Nicorros, Nicorros Al
Steel, Cast Iron,

Werkstoffe No. 2.4377

MECHANICAL PROPERTIES

>480	>280	>35	+20°C. >120 -196°C. >110
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J)

METAL WELD COMPOSITION %

C	Si	Mn	Cu	Ni	Fe	Ti
0.025	0.59	2.95	29.5	BAL	1.05	2.2

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Thorough cleaning of the weld zone is paramount. 100% Argon gas for TIG applications, Argon/Helium or Argon for MIG or proprietory special gases. Prior to welding, all traces of paint, oil, grease or other sources of hydrocarbons to be removed.

Nickel/Alloy Filler Wire

AWS A5.14 ER NiCr-3
BS 2901 Pt5: NA 35
DIN 1736 SG NiCr20Nb 2.4806

NW-1720

DESCRIPTION & APPLICATION

Nickel Alloy Filler Wire for the joining and surfacing of Alloys of a similar composition, (Inconel 600) Also suitable for the joining of these Alloys to steel, Copper/Nickel and other Nickel alloys. Used in high-grade plant/engineering primarily for the Petro-chemical industry.

BASE MATERIALS

Inconel 600
Nicrofer 6023, Nicrofer 7216, 7216H, 7216LC
Nimonic 75

MECHANICAL PROPERTIES

>620	>380	>35	-196°C. >100
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J)

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Nb	Fe	Cu	Ti
0.013	0.08	3.0	20.0	BAL	2.4	0.9	0.015	0.5

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Thorough cleaning of the weld zone is paramount. 100% Argon gas for TIG applications, Argon/Helium or Argon for MIG or proprietory special gases. Do not overheat. Prior to welding, all traces of paint, oil, grease or other sources of hydrocarbons to be removed.

AWS A5.14 ER NiCrMo-3
BS 2901 Pt5: NA 43
Werkstoffe No 2.4831 Din 1736 NiCr21Mo9Nb

Nickel/Chrome/Moly Filler Wire

NW-1740

DESCRIPTION & APPLICATION

Nickel Alloy Filler Wire for the joining and surfacing of Alloys of a similar composition, (Inconel 625) Also suitable for the joining of these Alloys to steel, copper/nickel and other Nickel alloys. Overlay of forging dies. Used in high-grade plant/engineering primarily for the Petro-chemical industry. Can be used to join other Nickel alloys, such as alloy 825, where Micro-fissuring is problematic.

BASE MATERIALS

Inconel 625
Nicrofer 6020h Mo, Nicrofer 4221h Mo
Alloy 800H, 825
Alloy 601

MECHANICAL PROPERTIES

>750	>450	>40	-196°C. >80
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J)

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	Nb	Ta	Fe
0.02	0.1	0.02	22.0	BAL	9.0	3.5	3.5	<1.0

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Thorough cleaning of the weld zone is paramount. 100% Argon gas for TIG applications, Argon/Helium or Argon for MIG or proprietory special gases. Do not overheat. Prior to welding, all traces of paint, oil, grease or other sources of hydrocarbons to be removed.

Copper/Nickel Filler Wire

AWS A5.14 ER CuNi
BS 2901 Pt3: C18
Werkstoffe No 2.0837

NW-1750

DESCRIPTION & APPLICATION

Copper/Nickel Alloy Filler Wire for the joining and surfacing of Alloys of a similar composition, (CuNi 30, CuNi10) Also suitable for the joining of these Alloys to steel, Copper/Nickel and other Nickel alloys. Used in high-grade plant/engineering primarily for the Marine, Power Generation and Petro-chemical industry.

BASE MATERIALS

Monel Alloy 450
Cunifer 30
Cunifer 10

MECHANICAL PROPERTIES

>360	>200	>30	~120
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Si	Mn	Cu	Ni	Ti	Fe	Pb
0.05	0.8	BAL	30.0	0.3	0.5	0.001

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Thorough cleaning of the weld zone is paramount. 100% Argon gas for TIG applications, Argon/Helium or Argon for MIG or proprietory special gases. Do not overheat. Prior to welding, all traces of paint, oil, grease or other sources of hydrocarbons to be removed.

AWS A5.14 ER NiCrMo-4
BS 2901 Pt5: NA 48
Werkstoffe No 2.4887

Nickel/Chrome/Moly Filler Wire

NW-1760

DESCRIPTION & APPLICATION

Nickel Alloy Filler Wire for the joining and surfacing of Alloys of a similar composition, (HASTELOY C276) Also suitable for the joining of this Alloy to other Nickel alloys. Used in high-grade plant/engineering primarily for the Petro-chemical industry. Highly resistant to sulphurous environment.

BASE MATERIALS

Hastelloy C276

MECHANICAL PROPERTIES

>720	>430	40	+20°C. >65
UTS n/mm	YIELD 0.2%	ELONG A5%	CHARPY (J)

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Mo	Fe	W
0.004	0.05	0.5	16.0	58.0	16.0	6.0	3.5

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Thorough cleaning of the weld zone is paramount. 100% Argon gas for TIG applications, Argon/Helium or Argon for MIG or proprietory special gases. Do not overheat. Prior to welding, all traces of paint, oil, grease or other sources of hydrocarbons to be removed.

Ni-Fe Solid MIG/TIG Wire
Welding of Cast Iron

BS 2901 Pt5: NA 47
ISO 1071 NiFe-1

SW-55

DESCRIPTION & APPLICATION

MIG Filler Wire for the repair and reclamation of Cast Iron, particularly Spheroidal Graphite and Ductile Iron. Also suitable for the welding of Cast Iron to Mild and low Alloy Steels.

BASE MATERIALS

Cast Irons of the Flake Graphite, Spheroidal Graphite and Nodular type, such as GG and GGG.

MECHANICAL PROPERTIES

N/A	N/A	N/A	140-190
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cu	Ni	Fe
0.02	0.1	0.3	0.02	55.0	BAL

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.0, 1.2, 1.6mm (MIG)
1.6, 2.4mm (TIG)

WELDING INSTRUCTIONS

MIG & TIG Shielding Gas 5% CO_2 in Argon. Weld with Dip transfer where possible. Do not overheat base material. Fill all craters. TIG. Pure Argon.

For more details on welding of Cast Iron, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Aluminium Alloys

Filler Wires for Joining Similar/Dissimilar Aluminium Alloys

Line 1: Max Strength **Line 2:** Max Corrosion Resistance **Line 3:** Freedom from Cracking **Line 4:** Best Colour Match when Anodising

Please note the table below is for guidance purposes only.

Base Material	7020	6082	6063	6061	6101A	5083	5454	5154A	5251	5005	3105	1200	1080A	1050A
1050A	AW-5556 AW-5556 AW-5556 AW-5556	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 -	AW-5556 AW-5556 AW-5556 AW-5556	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-4043 AW-3103 AW-4043 AW-3103	AW-4043 AW-1050A AW-4043 AW-1050A	AW-4043 AW-1050A AW-4043 AW-1050A	AW-4043 1 AW-1050A 2 AW-4043 3 AW-1050A 4
1080A	AW-5556 AW-5556 AW-5556 AW-5556	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 -	AW-5556 AW-5556 AW-5556 AW-5556	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-4043 AW-3103 AW-4043 AW-3103	AW-4043 AW-1050A AW-4043 AW-1050A	AW-4043 AW-1050A AW-4043 AW-1050A	1 2 3 4
1200	AW-5556 AW-5556 AW-5556 AW-5556	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 -	AW-5556 AW-5556 AW-5556 AW-5556	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-4043 AW-3103 AW-4043 AW-3103	AW-4043 AW-1050A AW-4043 AW-1050A	1 2 3 4	
3105	AW-5556 AW-5556 AW-5556 AW-5556	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 -	AW-5556 AW-5556 AW-5556 AW-5556	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-4043 AW-3103 AW-4043 AW-3103	1 2 3 4		
5005	AW-5556 AW-5556 AW-5556 AW-5556	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 -	AW-5556 AW-5556 AW-5556 AW-5556	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5154 AW-5154 AW-5356 AW-5154	1 2 3 4			
5251	AW-5556 AW-5556 AW-5556 AW-5556	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 -	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5154 AW-5356 AW-5356	AW-5556 AW-5554 AW-5356 AW-5356	1 2 3 4				
5154A	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 -	AW-5356 AW-5154 AW-5356 AW-5356	AW-5356 AW-5554 AW-5356 AW-5154	AW-5356 AW-5554 AW-5356 AW-5154	1 2 3 4					
5454	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 AW-5356	AW-5356 AW-5356 AW-5356 -	AW-5356 AW-5154 AW-5356 AW-5154	AW-5356 AW-5554 AW-5356 AW-5554	1 2 3 4						
5083	AW-5556 AW-5556 AW-5556 AW-5356	AW-5556 AW-5556 AW-5356 AW-5356	AW-5556 AW-5556 AW-5356 AW-5356	AW-5556 AW-5556 AW-5356 AW-5356	AW-5556 AW-5556 AW-5356 -	AW-5556 AW-5556 AW-5556 AW-5356	1 2 3 4							
6101A	- - - -	AW-4043 AW-4043 AW-4043 -	AW-4043 AW-4043 AW-4043 -	AW-4043 AW-4043 AW-4043 -	AW-4043 AW-4043 AW-4043 -	1 2 3 4								
6061	- - - -	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	1 2 3 4									
6063	- - - -	AW-4043 AW-4043 AW-4043 AW-5356	AW-4043 AW-4043 AW-4043 AW-5356	1 2 3 4										
6082	- - - -	AW-4043 AW-4043 AW-4043 AW-5356	1 2 3 4											
7020	AW-5556 AW-5556 AW-5556 AW-5556	1 2 3 4												

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AWS A5.10 92: ER1100~
BS 2901 1990 Pt 4 1050A

Aluminium Filler Wire
Joining of Pure Aluminium

AW-1050

DESCRIPTION & APPLICATION

TIG/MIG Filler Wire for the repair and reclamation of Pure Aluminium Can be used with Oxy – Acetylene and an appropriate flux as a Brazing alloy. Can be used for alloys that are to be Anodised. Soft wire - best used in MIG form with Spool-on-Gun or push-pull setup.

BASE MATERIALS

Joining of Pure Aluminium by TIG process or Oxy-Acetylene.
1050, 1080, 1200, LM0.

MECHANICAL PROPERTIES

~85	~35	~40
UTS n/mm	YIELD 0.2%	ELONG A5%

METAL WELD COMPOSITION %

Al	Si	Mn	Mg	Fe
BAL	0.04	0.002	0.002	0.16

PACKAGING

7kg Spools (MIG)
2kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2, 1.6mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium.
Oxy-acetylene - neutral flame with appropriate flux.

For more details on welding of Aluminium Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Aluminium Alloy Filler Wire
Silicon bearing Alloys

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

AW-4043

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Silicon bearing Aluminium Alloys.

BASE MATERIALS

Joining of Aluminium Alloys of similar composition (4043) and alloys where neither. Magnesium nor Silicon predominate. Not to be used where Anodising is to be final finish. 6063, 6082, LM2, LM4, LM6, LM9, LM20, LM25, LM27.

MECHANICAL PROPERTIES

293	144	24
UTS n/mm	YIELD 0.2%	ELONG A5%

METAL WELD COMPOSITION %

Al	Si	Mn	Mg	Fe
BAL	5.0	0.05	0.05	0.8

PACKAGING

7kg Spools and 0.5kg Mini-Spools (MIG)
2kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2, 4.0mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible. Do not overheat base material. Fill all craters.

For more details on welding of Aluminium Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.10 92: ER5183
EN ISO 18273-S 2004 AL 5183

Aluminium Alloy Filler Wire
Mg/Mn bearing Alloys

AW-5183

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Magnesium - Manganese bearing Aluminium Alloys (Marine grade). Higher corrosion resistance to Marine Environment than 5356.

BASE MATERIALS

Joining of Aluminium Alloys of similar composition (5083) Aluminium Mould material (7020).

MECHANICAL PROPERTIES

293	144	24
UTS n/mm	YIELD 0.2%	ELONG A5%

METAL WELD COMPOSITION %

Al	Si	Mn	Mg	Fe
BAL	0.08	0.7	4.9	0.2

PACKAGING

7kg Spools (MIG)
2kg Tubes (TIG)

DIAMETERS

1.0, 1.2mm (MIG)
1.6, 2.4, 3.2, 4.0mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible. Do not overheat base material. Fill all craters.

For more details on welding of Aluminium Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Aluminium Alloy Filler Wire
Magnesium Bearing Alloys

AWS A5.10 92: ER5356
EN ISO 18273-S 2004 AL 5356

AW-5356

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Magnesium bearing Aluminium Alloys. Recommended also for use on Alloys where neither Silicon nor Magnesium predominate and where Anodising is to be used as final finish.

BASE MATERIALS

Joining of Aluminium Alloys of similar composition (5356).
5251, 5154, 5454, 6063, 6082, LM5.

MECHANICAL PROPERTIES

290	133	≥25
UTS n/mm	YIELD 0.2%	ELONG A5%

METAL WELD COMPOSITION %

Al	Si	Mn	Mg	Cu	Ti
BAL	0.5	0.15	5.0	0.1	0.1

PACKAGING

7kg Spools and 0.5kg Mini-Spools (MIG)
2kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible.
Do not overheat base material. Fill all craters.

For more details on welding of Aluminium Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.10 92: ER5556
EN ISO 18273-S 2004 AL 5556

Aluminium Alloy Filler Wire
Mg/Mn Bearing Alloys

AW-5556

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Magnesium/Manganese bearing Aluminium Alloys (Marine grade). Higher corrosion resistance to Marine Environment than 5356. Minimum Mg content 4.7%.

BASE MATERIALS

Joining of Aluminium Alloys of similar composition (5556, 5083) Aluminium Mould material (7020).

MECHANICAL PROPERTIES

299	150	~20
UTS n/mm	YIELD 0.2%	ELONG A5%

METAL WELD COMPOSITION %

Al	Si	Mn	Mg	Fe
BAL	0.07	0.7	5.0	0.15

PACKAGING

7kg Spools (MIG)
2kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible. Do not overheat base material. Fill all craters. **Note:** Under ISO 18273 there are 4 versions of this alloy, 5556, 5556A, 5556B and 5556C with varying max/min of Mg and/or Mn.

For more details on welding of Aluminium Alloys, please see our Information Sheets.
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Filler Wires for Joining Similar/Dissimilar Alloys

Line 1: First Choice **Line 2:** Second Choice **Line 3:** Third Choice **Line 4:** Fourth Choice

Please note the table below is for guidance purposes only.

Base Material	Cast Iron	Carbon Steel	Copper-Ni 90/10	Copper-Ni 70/30	Manganese Bronze	Nickel-Al Bronze	Aluminum Bronze	Brass	Silicon Bronze	Phos/Tin Bronze	Copper
Copper	CW-1890 CW-1820 - -	CW-1890 CW-1820 - -	NW-1750 - - -	NW-1750 - - -	CW-1890 CW-1820 - -	CW-1890 CW-1840 - -	CW-1890 - - -	CW-1820 - - -	CW-1820 - - -	CW-1800 - - -	CW-1860 - - - 1 2 3 4
Phos/Tin Bronze	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1820 - - -	CW-1800 - - - 1 2 3 4	
Silicon Bronze	CW-1820 - - -	CW-1820 - - -	CW-1820 NW-1750 - -	CW-1820 NW-1750 - -	CW-1820 - - -	CW-1840 - - -	CW-1820 - - -	CW-1820 - - -	CW-1820 - - - 1 2 3 4		
Brass	CW-1820 - - -	CW-1820 - - -	CW-1820 - - -	CW-1820 - - -	CW-1840 - - -	CW-1820 - - -	CW-1820 - - -	CW-1820 - - - 1 2 3 4			
Aluminum Bronze	CW-1890 CW-1810 - -	CW-1890 CW-1810 - -	CW-1890 CW-1810 - -	CW-1890 CW-1810 - -	CW-1890 CW-1810 - -	CW-1890 CW-1840 CW-1810 -	CW-1890 CW-1810 - - 1 2 3 4				
Nickel-Al Bronze	CW-1840 - - -	CW-1890 CW-1840 - -	CW-1890 CW-1840 - -	CW-1890 CW-1840 - -	CW-1890 - - -	CW-1840 CW-1890 - - 1 2 3 4					
Manganese Bronze	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - -	CW-1800 - - - 1 2 3 4						
Copper-Ni 70/30	CW-1890 NW-1710 - -	CW-1890 NW-1710 - -	NW-1750 - - -	NW-1750 - - - 1 2 3 4							
Copper-Ni 90/10	CW-1890 NW-1710 - -	CW-1890 NW-1710 - -	NW-1750 - - - 1 2 3 4								
Carbon Steel	CW-1890 CW-1820 - -	CW-1820 - - - 1 2 3 4									
Cast Iron	NW-1700 CW-1820 SW-55 - 1 2 3 4										

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Copper Alloys

Tin Bronze Filler Wire
Joining of Similar Alloys

AWS A5.7 ER CuSn-A~
BS 2901 1990 Pt3: C11

CW-1800

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Tin Bronzes, Phosphor Bronze and Gunmetal. Also suitable for the joining of Cast Iron to Mild and low Alloy Steels and overlay of such material.

BASE MATERIALS

Phosphor Bronze, Gunmetal, Tin Bronze.
Joining of Mild and Low Alloy Steel. Overlay and joining of Cast Iron, Mild/Cast Steel. Joining of Galvanised Sheet.

MECHANICAL PROPERTIES

290	150	25	~100
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Cu	Si	Sn	Al	P	Pb
BAL	0.02	7.5	0.03	0.03	0.02

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible. Do not overheat base material. Fill all craters.

For more details on welding of Copper Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.7 ER CuAl-A1
BS 2901 1990 Pt3: C28

Aluminium Bronze Filler Wire

CW-1810

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Aluminium Bronzes of similar composition. Suitable for the repair and reclamation of Bronzes, such as those used in Aluminium Die Casting, overlay of Steels to produce Spark-free surfaces with low Coefficient of Friction.

BASE MATERIALS

Aluminium Bronze
Overlay of steel

MECHANICAL PROPERTIES

200	N/A	~35	~100
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Cu	Fe	Ni	Al	Zn	Pb	Mn
BAL	0.25	0.5	8.5	0.1	0.002	0.75

PACKAGING

15kg Spools (MIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Shielding Gas, Pure Argon or Argon/Helium. Preheat up to 300°C for large sections.
Avoid maintaining temp 340-650°C for long periods, due to possibility of grain growth.

Silicon Bronze Filler Wire
MIG Brazing

AWS A5.7 CuSi-A
BS 2901 1990 Pt3: C9

CW-1820

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Silicon Bronzes, Phosphor Bronze, Gunmetal and Brass. Also suitable for the joining of Cast Iron to Mild and Low Alloy Steels, and overlay of such material. In MIG form, commonly referred to as MIG Brazing wire, used in Motor Vehicle repair and assembly.

BASE MATERIALS

Copper and Copper alloys, Silicon Bronze, Gunmetal, Tin Bronze, Brass.
Joining of Thin Mild and Low Alloy Steel. Overlay and joining of Cast Iron, Mild/Cast Steel. Galvanised Steel, Boron Steel (Motor Industry). Joining of Galvanised Sheet.

MECHANICAL PROPERTIES

~350	~145	30	~90
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Cu	Si	Mn	Al	Fe	Pb
BAL	3.0	1.1	0.03	0.1	0.01

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible.

For more details on welding of Copper Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.7 ER CuNiAl
BS 2901 PT3: C26
DIN 1733: SG CuAl8Ni6

Complex Aluminium Bronze Filler Wire

CW-1840

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Nickel Aluminium Bronzes of similar composition. Also suitable for the joining of Cast Iron to Mild and low Alloy Steels and overlay of such material to provide sliding or bearing surfaces. Seawater-resistant, making the alloy suitable for marine applications, such as propellers, pumps and fittings. Low coefficient of friction.

BASE MATERIALS

Aluminium Bronze of a similar composition. Spark resistant applications. Joining of Mild and Low Alloy Steel. Overlay and joining of Cast Iron. Overlay of Automotive Tooling to provide low friction draw edges.

MECHANICAL PROPERTIES

~700	~400	~19	up to 230
UTS N/MM	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Cu	Si	Al	Mn	Ni	Fe	Sn
BAL	0.04	8.5	1.3	4.5	3.3	0.002

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

1.2, 1.6mm (MIG)
1.6, 2.4, 3.2 (TIG)

WELDING INSTRUCTIONS

Shielding Gas Pure Argon or Argon/Helium. Weld with Dip transfer where possible. Pre-heat thick sections, but do not overheat base material. Maintain interpass temperature below 150°C. Fill all craters.

For more details on welding of Copper Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Copper Filler Wire

AWS A5.7 ER Cu
BS 2901 1990 Pt3: C7

CW-1860

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Pure Copper.
Ideal for the joining of Copper Bus-Bars, Electrical Contacts, Calorifiers, and Boilers.

BASE MATERIALS

Copper

MECHANICAL PROPERTIES

UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB
200	-	~35	~60

METAL WELD COMPOSITION %

Cu	Mn	Sn	Si	P	Pb
BAL	0.15	0.5	0.25	0.01	0.005

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas, Pure Argon or Argon/Helium. Preheat up to 300°C for large sections.
Avoid maintaining temp 340- 650°C for long periods, due to possibility of grain growth.

For more details on welding of Copper Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

AWS A5.7 ERCuAl-A2~
BS 2901 1990 Pt3: C13

Aluminium Bronze Filler Wire

CW-1890

DESCRIPTION & APPLICATION

MIG/TIG Filler Wire for the repair and reclamation of Aluminium Bronzes of similar composition. Suitable for the repair and reclamation of Bronzes, such as used in Aluminium Die Casting. Overlay of Steel to produce Spark-free surface with low Coefficient of Friction.

BASE MATERIALS

Aluminium Bronze
Overlay of steel

MECHANICAL PROPERTIES

200	-	~35	~60 (work hardens)
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Cu	Fe	Ni	Al	Zn	Pb	Mn
BAL	1.0	0.5	10.0	0.05	0.002	0.5

PACKAGING

15kg Spools (MIG)
5kg Tubes (TIG)

DIAMETERS

0.8, 1.0, 1.2mm (MIG)
1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Shielding Gas, Pure Argon or Argon/Helium. Preheat up to 300°C for large sections. Avoid maintaining temp 340-650°C for long periods, due to possibility of grain growth.

For more details on welding of Copper Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Hardfacing Alloys

Solid Wire (MIG)

Impact Resistance (Hard Facing)

HW-1400

DESCRIPTION & APPLICATION

Solid, copper coated MIG wire for the overlay of all Carbon/Manganese steels and Austenitic 14% Manganese. Also suited for the overlay of Cast Iron (over Buffer layer). Main applications are Earth moving and mining equipment, hammers, percussion tools and components where the main wear factor is impact. Machineable with correct tooling and work hardenable.

BASE MATERIALS

All Carbon/Manganese steels, Hadfields Steel, Cast Iron (over buffer layer of Westbrook SW-55 or similar in Electrode form).

MECHANICAL PROPERTIES

N/A	N/A	N/A	350-400
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Cu	Mo
0.068	0.72	0.99	5.8	0.16	0.8

PACKAGING

15kg Spools (MIG)

DIAMETERS

1.0, 1.2mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material. Large deposits may require a buffer layer of SW 312 or SW 307 to avoid cracking. Do not pre-heat Austenitic Manganese. Shielding Gas 5% or 20% Co_2 in Argon.

For more details on welding of Hard-facing, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

DIN 8555 MSG 6-60-GTZ
Werkstoffe No 1.4718

Solid Wire (MIG)
Hard facing

HW-1410

DESCRIPTION & APPLICATION

Solid, copper coated/bare MIG wire for the overlay of all Carbon Manganese steels. Also suited for the overlay of Cast Iron (over Buffer layer). Applications include rail tamping tools, hammers, percussion tools, mixing paddles, Earth moving equipment and Agricultural implements. Finish by grinding. Hardness dictated by many factors, including dilution, hardness of base material, etc.

BASE MATERIALS

All Carbon/Manganese steels, (over 307 Buffer layer if necessary),
Cast Iron (over buffer layer of Westbrook SW 55, or similar, in electrode form).

MECHANICAL PROPERTIES

UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV
N/A	N/A	N/A	580-650

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ni	Fe
0.45	3.0	0.8	9.0	0.6	BAL

PACKAGING

15kg Spools (MIG)

DIAMETERS

1.0, 1.2, 1.6mm (MIG)

WELDING INSTRUCTIONS

Preheat as per the requirements of the base material. Large deposits may require a buffer layer of SW 312 or SW 307 to avoid cracking. Shielding Gas, 5% or 20% CO_2 in Argon. Set amps/volts on low side for minimum penetration.

For more details on welding of Hard-facing, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

HSS TIG Filler Wire
Tooling (55-61HRc)

DIN 8555 WSG 4-GZ-60-S
Werkstoffe No 1.3348

HW-1460

DESCRIPTION & APPLICATION

HSS TIG Filler Wire for the repair and reclamation of High Speed Steels, Cropping and Cutting Blades, Hot Shear Blades and surfacing on machine components and tools. Particularly suited for materials exposed to temperatures up to 500°C, together with abrasion, compression and erosion. May be used in the manufacture of Cutting Tools from low alloy base material. Usage includes cutting edges for guillotine blades, dies, swages and hammers.

BASE MATERIALS

BS D2, D3, S1, 2767, W2, H13, H10, H11, O1, M2 (HSS)
Werkstoffe Nr. 1.3316, 1.3333, 1.2767, 1.3344, 1.3346, 1.2510

MECHANICAL PROPERTIES

N/A	N/A	N/A	~550-650
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cr	Ti	Mo	W	V
0.9	0.5	0.3	2.5	0.6	9.1	1.8	2.0

PACKAGING

5kg Tubes (TIG)

DIAMETERS

1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Always preheat as per the requirements of the base material. Large deposits will require a buffer layer of SW 312 or NW 1720 to avoid cracking.

For more details on welding of Tools and Dies, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

DIN 8555 WSG 3-GZ-55T
Werkstoffe No. 1.2343
UNS T 20811

TIG Filler Wire
Hot work Tool Steel (H11)

HW-1461

DESCRIPTION & APPLICATION

TIG Filler Wire for the repair and reclamation of Hot Work Tool Steels, Cropping and Cutting Blades, Hot Shear Blades and surfacing on machine components and tools. Particularly suitable for those exposed to temperatures up to 500°C, together with abrasion, compression and erosion. Matching filler for H11.
Usage includes cutting edges for guillotine blades, dies, swages and hammers

BASE MATERIALS

BS D3, S1, 2767, W2, H13, H10, H11, O1
Werkstoffe Nr. 1.2080, 1.2550, 1.2767, 1.2833, 1.2343, 1.2344

MECHANICAL PROPERTIES

N/A	N/A	N/A	~550-600
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HV

METAL WELD COMPOSITION %

C	Si	Mn	Cr	V	Mo
0.40	1.0	0.40	5.0	0.4	1.1

PACKAGING

5kg Tubes (TIG)

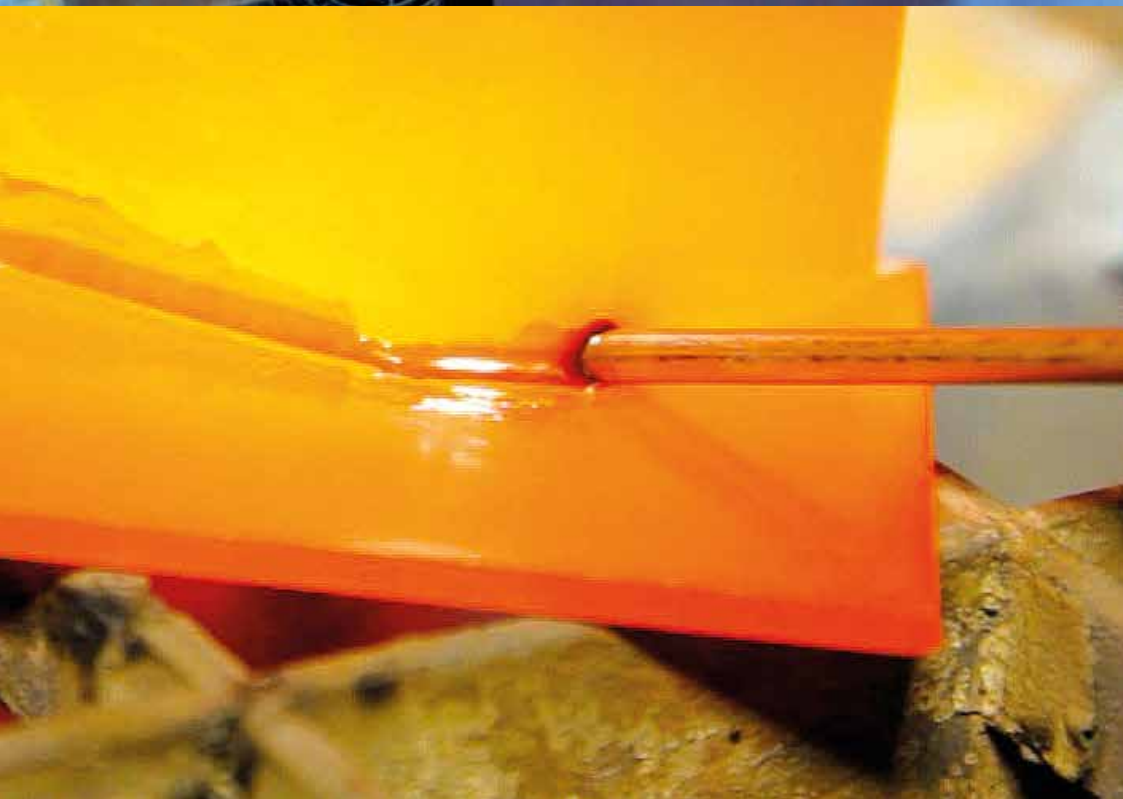
DIAMETERS

1.6, 2.4, 3.2mm (TIG)

WELDING INSTRUCTIONS

Always preheat as per the requirements of the base material. Large deposits will require a buffer layer of SW 312 or NW 1720 to avoid cracking.

For more details on welding of Tools and Dies, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**



Brazing

General Purpose Brazing Alloy

BS 1453 C2
DIN 8513 L CuZn40
EN ISO 3677 B Cu 60 Zn Si 870-890

BA-1200

DESCRIPTION & APPLICATION

General purpose brazing Alloy for joining of Copper alloys, Mild Steel, Galvanised Sheet and Cast Iron. Available in bare wire, flux-coated or flux-cored. Melting Range 870-890°C.

BASE MATERIALS

Copper Alloys, Mild and Low Alloy Steels, Cast iron, Stainless Steel.

MECHANICAL PROPERTIES

~430	N/A	N/A	~120
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Si	Zn	Mn	Cu	Ni	Sn
<1.0.	BAL	0.1	59.7	0.2	0.2

PACKAGING

Diameters available: 1.5mm, 2.0mm, 2.5mm, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Slightly oxidising flame. For bare wire use High Temp Brazing Flux.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

BS 1453 C5
DIN 8513 L CuNi10Zn42
EN ISO 3677 B Cu 49 Zn Ni Si 890-920

Nickel Bearing Brazing Alloy

BA-1210

DESCRIPTION & APPLICATION

High strength, Nickel-bearing brazing alloy. Usage includes wear facing of gear teeth, overlay/joining of cast iron, etc. to give non sparking wear facing (Motor industry Draw Dies). Work hardening deposit with low coefficient of friction. Available in bare wire, or flux-coated. Melting range 920-980°C. Melting Range 870-890°C.

BASE MATERIALS

Copper Alloys, Mild and Low Alloy Steels, Cast iron, Stainless Steel.

MECHANICAL PROPERTIES

~540	N/A	N/A	>200
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Si	Zn	Mn	Cu	Nl
<1.0	BAL	Trace	49.9	9.0

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Slightly oxidising flame. For bare wire use High Temp Brazing Flux.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Copper-Phosphorus Brazing Alloy

BS 1845 CP-3
DIN L-Cu P7

Cp-0

DESCRIPTION & APPLICATION

Copper-Phosphorus Brazing Alloy for joining Copper to copper without the need for a flux and Copper to other Alloys (with Flux). Not to be used on alloys containing nickel or Iron. Ideal for electric motors. Least ductile of all CuP Alloys. Melting Range 710-805°C.

BASE MATERIALS

Copper and its alloys.

MECHANICAL PROPERTIES

N/A	N/A	N/A	N/A
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Ag	P	Cu	
-	7.0	93	49.9

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Neutral flame. No flux required on copper to Copper Joints, however a flux must be used on other Alloys. See Warning above.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

BS 1845 CP-2
DIN L-Ag2P~

Copper-Phosphorus Brazing Alloy

Cp-2

DESCRIPTION & APPLICATION

Copper-Silver-Phosphorus Brazing Alloy for joining Copper to Copper without the need for a flux and Copper to other Alloys (with Flux) Not to be used on alloys containing nickel or Iron. Melting Range 650-820°C.

BASE MATERIALS

Copper and its alloys.

MECHANICAL PROPERTIES

UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB
N/A	N/A	N/A	N/A

METAL WELD COMPOSITION %

Ag	P	Cu
2.0	6.7	91.3

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Neutral flame. No flux required on copper to Copper Joints, however a flux must be used on other Alloys. See Warning above.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Copper-Phosphorus Brazing Alloy

BS 1845 CP4
DIN L-Ag5P~

Cp-5

DESCRIPTION & APPLICATION

Copper-Silver-Phosphorus Brazing Alloy for joining Copper to copper without the need for a flux and Copper to other Alloys (with Flux) Not to be used on alloys containing nickel or Iron. Ideal for use on refrigeration equipment. Melting Range 650-810°C.

BASE MATERIALS

Copper and its alloys.

MECHANICAL PROPERTIES

N/A	N/A	N/A	N/A
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Ag	P	Cu
5.0	6.0	89.0

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Neutral flame. No flux required on copper to Copper Joints, however a flux must be used on other Alloys. See Warning above.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Copper-Phosphorus Brazing Alloy

Cp-6

DESCRIPTION & APPLICATION

Copper-Silver-Phosphorus Brazing Alloy for joining Copper to copper without the need for a flux and Copper to other Alloys (with Flux). Not to be used on alloys containing nickel or Iron. Ideal for use on refrigeration equipment for increased ductility over CP-5 (BS CP-4). Melting Range 650-720°C.

BASE MATERIALS

Copper and its alloys.

MECHANICAL PROPERTIES

UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB
N/A	N/A	N/A	N/A

METAL WELD COMPOSITION %

Ag	P	Cu
6.0	7.3	86.7

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Neutral flame. No flux required on copper to Copper Joints, however a flux must be used on other Alloys. See Warning above.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Copper-Phosphorus Brazing Alloy

BS 1845 CP-1
DIN L-Ag15P

Cp-15

DESCRIPTION & APPLICATION

Copper-Silver-Phosphorus Brazing Alloy for joining Copper to copper without the need for a flux and Copper to other Alloys (with Flux). Not to be used on alloys containing nickel or Iron. Ideal for use on refrigeration equipment for increased ductility over CP-6. Melting Range 650-800°C.

BASE MATERIALS

Copper and its alloys.

MECHANICAL PROPERTIES

N/A	N/A	N/A	N/A
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Ag	P	Cu
15	5.0	80

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 5kg Tubes

FLAME DATA

Neutral flame. No flux required on copper to Copper Joints, however a flux must be used on other Alloys. See Warning above.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

BS 1845 Ag 20
DIN L-AG-40Sn

Silver Brazing Alloy
(Cadmium Free)

SB-40

DESCRIPTION & APPLICATION

Cadmium-Free Silver Brazing Alloy with a short plastic range for applications that require capillary capabilities. Non-Toxic for food industry usage. Melting range 650-710°C.

BASE MATERIALS

Copper Alloys, Mild and Low Alloy Steels, Cast iron, Stainless Steel.

MECHANICAL PROPERTIES

~430	N/A	N/A	-
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Ag	Zn	Cu	Sn
40	28	30	2

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 1kg Tubes

FLAME DATA

Neutral flame. For bare wire use Westbrook SB Flux.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Silver Brazing Alloy
(Cadmium Free)

BS 1845 Ag 14
DIN L-AG-55Sn

SB-55

DESCRIPTION & APPLICATION

Cadmium-Free Silver Brazing Alloy with a very short plastic range for applications that require capillary capabilities. Non-toxic for food industry usage. Good colour match for Stainless Steel. Melting range 630-660°C (Solidus-Liquidus).

BASE MATERIALS

Copper Alloys, Mild and Low Alloy Steels, Cast iron, Stainless Steel.

MECHANICAL PROPERTIES

~430	N/A	N/A	-
UTS n/mm	YIELD 0.2%	ELONG A5%	HARDNESS HB

METAL WELD COMPOSITION %

Ag	Zn	Cu	Sn	Cu
55	22	21	2	0.1

PACKAGING

Diameters available: 1.5, 2.0, 2.5, 3.0mm
Packed in 1kg Tubes

FLAME DATA

Neutral flame. For bare wire use Westbrook SB Flux.

WELDING INSTRUCTIONS

For more details on welding of Brazing Alloys, please see our Information Sheets.
Visit: www.westbrookwelding.co.uk/**downloads**

Helping you find the solution for the perfect weld.

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