



Flame filler metals

General

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	Type of filler metal											For joining:					
	bare filler rod	flux-coated filler rod	flux-cored filler rod	soldering paste	wire spool	mild steel	steel	stainless steel	cast iron	iron	aluminium	copper	copper alloys	brass	zinc		lead
WELDING																	
■ SOUDOFER CUIVRE	●					●											page 7-3
BRAZE WELDING																	
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BRAZING																	
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FLUX																	
																	page 7-25




FILLER METALS FOR FLAME PROCESSES

The range is divided into three main product groups:

- filler metals for welding
- filler metals for braze welding
- filler metals for brazing and soldering
(brazing temperature > 450 °C and soldering temperature < 450 °C)

Various flame temperatures

Oxy-acetylene flame	3100 °C
Oxy-propane flame	2830 °C
Oxy-town gas flame.....	2800 °C
Air-acetylene flame.....	2100 °C
Air-propane flame.....	1800 °C
Air-natural gas flame	1750 °C

Filler metals for WELDING	CEMONT product
<p>These are used in joining operations where the metal of the pieces to be joined, known as the “base metal”, plays a part in forming the joint (“weld”) by melting. Depending on the thicknesses involved, welding is performed with or without a filler metal which is generally identical to the base metal. Only an oxy-acetylene flame is capable of welding almost all metals in common use due to its high temperature (3100 °C) and its oxide-reducing property.</p>	SOUDOFER CUIVRE
Filler metals for BRAZE WELDING	CEMONT product
<p>These are composed of copper/zinc (brass) alloys and are used in operations where the joint is obtained by means of a step-by-step technique similar to the autogenous fusion welding technique, the melting (liquidus) temperature of the filler metal being higher than 450 °C.</p>	<p>ATG approval</p> <p>The filler alloys and flux used in the assembly of natural gas and propane pipes must be approved by the AFG (French Gas Association). Products complying with these criteria are identified by this logo.</p> 
<p>BRAZING & SOLDERING</p> <p>Operations consisting of joining metallic parts with the aid of a filler metal in the liquid state, having a melting temperature lower than that of the parts to be joined and wetting the base metal which plays no part in forming the joint by melting.</p>	
Filler metals for BRAZING (Melting temperature > 450 °C)	CEMONT product
<p>Technique in which a joint, generally a capillary joint, is obtained with a filler metal whose melting (liquidus) temperature is higher than 450 °C.</p> <p>Silver alloy</p> <ul style="list-style-type: none"> ■ Very high level of joint safety ■ Brazing temperature of at least 620 °C ■ High mechanical strength and good resistance of the joints to vibration ■ CADMIUM FREE range compliant with European directive 2005/90/EC of 18 January 2006 <p>Copper-phosphorus alloy</p> <ul style="list-style-type: none"> ■ Economical brazing ■ Good mechanical strength of the joints ■ Use without flux on copper 	<p>SILVER CF</p> <p>CUPROBRAZ</p>
Filler metals for SOLDERING (Melting temperature < 450 °C)	CEMONT product
<p>Technique in which the melting (liquidus) temperature of the filler metal is lower than 450 °C.</p> <ul style="list-style-type: none"> ■ Easy working. ■ Due to the low melting temperatures (soldering temperature from 185 °C), this tin wire can be used with air-gas torches and soldering irons. ■ Tin/copper and tin/silver alloys conform to the directive of 10 June 1996 prohibiting the use of alloys containing lead in fixed installations designed for the production, treatment and distribution of water intended for human consumption, and RoHS directive 2002/95/EC of 27 January 2003. 	<p>FILETAIN CUIVRE FILETAIN ARGENT ETAIN FILETAIN PATETAIN S</p>



SOUDOFER CUIVRE

General characteristics

SOUDOFER CUIVRE is surface-treated (copper plated) to guarantee a long shelf life.
Used in joining the same grade of carbon steel.
Smooth fusion, stable molten pool.
Excellent crack resistance.

Read the material safety data sheets before use.
These are available at www.safety-welding.com

Applications:

- Welding of structural steels
- Piping, heating, tubular structural steelwork and pipework
- Pressurised tanks
- Thin sheet metal
- Aircraft and shipbuilding industries.

Standards

EN 12536-2000: OI
AWS A 5-2: R 45
DIN 8554: G1

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

SOUDOFER CUIVRE is used with an oxy-acetylene flame without flux.

Torch setting: on mild steel, 100 l/h per mm of sheet metal thickness, flat position.

MECHANICAL CHARACTERISTICS:

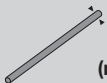

Rm (N/mm ² at 20 °C)	A% at 20 °C	KV at 20 °C
420	25	50 J

CHEMICAL ANALYSIS % (wire analysis, typical):

C	Mn	S	P
0.085	0.45	0.025	0.025

Melting temperature: 1500 °C

TO ORDER:

Product name	 \varnothing (mm)	 l (mm)	Cat. nr	Packaging
SOUDOFER Cuivre	1.6	1 000	W 000 293 703	5 kg tube (Ø 40 mm)
SOUDOFER Cuivre	2.0	1 000	W 000 293 706	5 kg tube (Ø 40 mm)
SOUDOFER Cuivre	2.4	1 000	W 000 293 709	5 kg tube (Ø 40 mm)
SOUDOFER Cuivre	3.2	1 000	W 000 293 712	5 kg tube (Ø 40 mm)
SOUDOFER Cuivre	4.0	1 000	W 000 293 715	5 kg tube (Ø 40 mm)



SOUDOBRONZE SOUDOBRONZE E

General characteristics

SOUDOBRONZE is used together with SOUDOBRONZE POUDRE flux.

SOUDOBRONZE E has a coating extruded at high pressure. This coating acts both as flux and as slag, improving mechanical characteristics and facilitating work in position. This coating is supple and flexible.

Standards

NF A 81.361: B/SB Cu 60 Zn Si 870-900
DIN 1733: L-Cu Zn 40
AWS A 5.8: RB Cu Zn A

Due to certain differences with the corresponding standards, the proposed classification is not absolute.



032.5005

Read the material safety data sheets before use. These are available at www.safety-welding.com

Applications:

- SOUDOBRONZE is a filler metal in the form of bare or coated (SOUDOBRONZE E) rods, designed for the braze welding of most common metals and alloys (cast irons, steels, copper alloys and nickel).
- Galvanized parts can be braze-welded without destroying the protective coating.

SOUDOBRONZE / SOUDOBRONZE E are used:

- with an oxy-acetylene, oxy-propane or oxy-natural gas flame
- with or without flux.

For optimum SOUDOBRONZE / SOUDOBRONZE E use, we recommend the following settings:

- on mild steel: 50 l/h per mm thickness
- on galvanized steel: 35 to 40 l/h per mm thickness
- on cast iron: 25 l/h per mm thickness
- on copper: 100 to 200 l/h per mm thickness.

MECHANICAL CHARACTERISTICS:

SOUDOBRONZE

Rm (N/mm ² at 20 °C)	A% at 20 °C
350	25

SOUDOBRONZE E

Rm (N/mm ² at 20 °C)	A% at 20 °C
400	25

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	Zn	Sn	Si	Total additions and impurities
60	remainder	0.9	0.15	≤ 0.5

Melting range: 870 – 900 °C

TO ORDER

SOUDOBRONZE POUDRE flux

Type	Cat. nr	Packaging
Powder	W 000 293 730	200 g pot

TO ORDER:

Filler metal

Product name	Ø (mm)	l (mm)	Cat. nr	Packaging	Conversion approximately
SOUDOBRONZE	2.0	1 000	W 000 293 540	5 kg tube (Ø 40 mm)	193 rods per tube
SOUDOBRONZE	2.4	1 000	W 000 293 543	5 kg tube (Ø 40 mm)	128 rods per tube
SOUDOBRONZE	3.0	1 000	W 000 293 546	5 kg tube (Ø 40 mm)	85 rods per tube
SOUDOBRONZE	4.0	1 000	W 000 293 549	5 kg tube (Ø 40 mm)	48 rods per tube
SOUDOBRONZE	5.0	1 000	W 000 293 552	5 kg tube (Ø 40 mm)	31 rods per tube
SOUDOBRONZE E	2.0	1 000	W 000 293 558	Tube (Ø 40 mm) containing 100 rods	2.72 kg tube
SOUDOBRONZE E	2.4	1 000	W 000 293 561	Tube (Ø 40 mm) containing 100 rods	4.11 kg tube
SOUDOBRONZE E	3.0	1 000	W 000 293 565	Tube (Ø 40 mm) containing 50 rods	3.04 kg tube
SOUDOBRONZE E	4.0	1 000	W 000 293 568	Tube (Ø 40 mm) containing 30 rods	3.20 kg tube
SOUDOBRONZE E	2.0	500	W 000 293 555	Plastic box containing 59 rods	0.8 kg per tube



BRASS FILLER METALS

SUPERIX E

General characteristics

SUPERIX E has a coating extruded at high pressure. This coating acts both as flux and as slag, improving mechanical characteristics and facilitating bonding on oxidised surfaces.

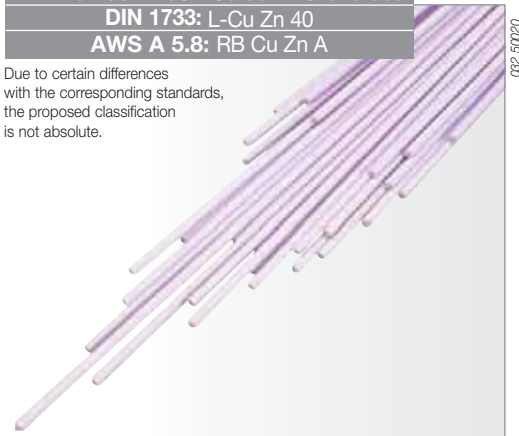
This coating is supple and flexible.

Read the material safety data sheets before use. These are available at www.safety-welding.com

Standards

- NF A 81.361: B/SB Cu 60 Zn Si 870-900
- DIN 1733: L-Cu Zn 40
- AWS A 5.8: RB Cu Zn A

Due to certain differences with the corresponding standards, the proposed classification is not absolute.



FLAME FILLER METALS

Applications:

- SUPERIX E is a filler metal in the form of a coated rod, designed for the braze welding of most common metals and alloys (cast irons, steels, copper alloys and nickel).
- Galvanized parts can be braze-welded without destroying the protective coating.

MECHANICAL CHARACTERISTICS:

Rm (N/mm ² at 20 °C)	A% at 20 °C
≥ 450	> 35

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	Zn	Sn	Si	Total additions and impurities
60	remainder	0.9	0.15	≤ 0.5

Melting range: 870 – 900 °C

SUPERIX E is used:

- with an oxy-acetylene, oxy-propane or oxy-natural gas flame
- without flux.

For optimum SUPERIX E use,

we recommend the following settings:

- on mild steel: 50 l/h per mm thickness
- on galvanized steel: 35 to 40 l/h per mm thickness
- on cast iron: 25 l/h per mm thickness
- on copper: 100 to 200 l/h per mm thickness.

TO ORDER:

Product name	 (mm)	 (mm)	Cat. nr	Packaging	Conversion approximately
SUPERIX E	2.5	500	W 000 293 572	1 kg plastic box (530 mm long)	48 rods per box



SUPERIX AG E

General characteristics

SUPERIX AG E has a yellow-coloured MINIFLUX coating extruded at high pressure. This acts both as flux and as slag, improving mechanical characteristics and facilitating work in position.

This coating is supple and flexible.

Read the material safety data sheets before use.
These are available at www.safety-welding.com

Applications:

- SUPERIX AG E is a filler metal in the form of a coated rod, designed for the braze welding of most common metals and alloys.
- Cast steels, unalloyed steels, machine castings, malleable cast irons, copper alloys (copper, brass, bronze, copper-nickel, copper-aluminium and monel) and nickel.
- Galvanized parts can be braze-welded without destroying the protective coating.
- Numerous applications both in construction and repair: bodywork, metalwork, metallic furniture and joinery, tubular structures, decoration and maintenance and repair work.

Standards

NF A 81.361: B/SB Cu 59 Zn Ag 850-890
NF A 81.362: 59 C 1

Due to certain differences with the corresponding standards, the proposed classification is not absolute.



032 50020

SUPERIX AG E is used:

- with an oxy-acetylene, oxy-propane or oxy-natural gas flame
- with or without flux.

For optimum SUPERIX AG E use, we recommend the following settings:

- on mild steel: 50 l/h per mm thickness
- on galvanized steel: 35 to 40 l/h per mm thickness
- on cast iron: 25 l/h per mm thickness
- on copper: 100 to 200 l/h per mm thickness.

MECHANICAL CHARACTERISTICS:

Rm (N/mm ² at 20 °C)	A% at 20 °C
480	> 30

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	Zn	Ag	Si	Total additions and impurities
59	remainder	1.0	0.11	≤0.5

Melting range: 850 – 890 °C

APPROVALS / ACCREDITATIONS

Compliant with DTU N°60.1

TO ORDER:

Product name	 (mm)	 (mm)	Cat. nr	Packaging	Conversion approximately
SUPERIX AG E	3.0	500	W 000 293 581	1 kg plastic box (530 mm long)	34 rods per box



FILALU

General characteristics

FILALU is a flux-cored wire developed for aluminium and aluminium alloy joining applications.

Applications:

- Furniture manufacturing
- Conservatories
- Automotive applications
- Sundry aluminium applications

Read the material safety data sheets before use. These are available at www.safety-welding.com



02250400

Standards


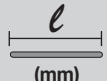
NF EN 1044 - 1999: AL 104
 EN ISO 3677 - 1995: B-Al 88 Si-575/585
 EN 573-3 - 1999: EN AW-4047 A

CHEMICAL ANALYSIS % (wire analysis, typical):

Al	Si
88	12

Melting range: 575 – 585 °C

TO ORDER:

Product name	 Ø (mm)	 l (mm)	Cat. nr	Packaging
FILALU	2.0	500	W 000 293 598	250 g box



CUPROBRAZ

General characteristics

Copper-phosphorus filler metal.
For use on copper and copper alloys only.
This brazing alloy can be used to make closely-spaced or overlaid joints without remelting existing joints.
Economical brazing of copper pipes (not to be used on GDF gas lines).

Read the material safety data sheets before use.
These are available at www.safety-welding.com

Recommended applications:

- Sanitary fixtures (hot or cold water)
- Decoration
- Copper boilerwork (boiler tanks and water heaters)
- Self-fluxing alloy on copper.

Note 1: Unlike the majority of filler metals mentioned in standard EN 1044, which only flow in a satisfactory manner at, near or above the liquidus temperature, most copper-phosphorus filler metals are sufficiently fluid to enable brazing at a temperature well below the liquidus.

Note 2: It is not recommended to use these filler metals with ferrous metals, nickel alloys or copper alloys containing nickel.

Standards

EN 1044-1999: CP 202
EN ISO 3677: B-Cu93P-710/820
NF A 81362: 07 B1
DIN 8513: L-CuP7

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used when working on copper alloys.

After brazing, any residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS:



Rm (N/mm ² at 20 °C)	A% at 20 °C
450	5

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	P	Melting range: 710 – 820 °C Minimum brazing temperature (approximate): 730 °C
93	7	

TO ORDER:

Filler metal

Product name	 Ø (mm)	 l (mm)	Cat. nr	Packaging
CUPROBRAZ	2.0	500	W 000 293 666	1 kg plastic box
CUPROBRAZ	2.0	500	W 000 293 669	5 kg plastic box
CUPROBRAZ	3.0	500	W 000 293 671	1 kg plastic box

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



CUPROBRAZ POLYVALENTE

General characteristics

Copper-phosphorus filler metal.
For use on copper and copper alloys only.
This brazing alloy can be used to make closely-spaced joints or tappings without remelting existing joints.
Economical brazing of copper pipes (not to be used on GDF gas lines).

Read the material safety data sheets before use.
These are available at www.safety-welding.com

Applications:

- Sanitary fixtures (hot or cold water)
- Decoration
- Copper boilerwork (boiler tanks and water heaters)
- Self-fluxing alloy on copper.

Note 1: Unlike the majority of filler metals mentioned in standard EN 1044, which only flow in a satisfactory manner at, near or above the liquidus temperature, most copper-phosphorus filler metals are sufficiently fluid to enable brazing at a temperature well below the liquidus.

Note 2: It is not recommended to use these filler metals with ferrous metals, nickel alloys or copper alloys containing nickel.

Standards

EN 1044-1999: CP 202
EN ISO 3677: B-Cu93P-710/820
NF A 81362: 07 B1
DIN 8513: L-CuP7

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used when working on copper alloys.

After brazing, any residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS:



Rm (N/mm ² at 20 °C)	A% at 20 °C
450	5

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	P	Melting range: 710 – 820 °C Minimum brazing temperature (approximate): 730 °C
93	7	

TO ORDER:

Filler metal

Product name	 (mm)	 (mm)	Cat. nr	Packaging
CUPROBRAZ POLYVALENTE	2.0	500	W 000 293 675	1 kg plastic box
CUPROBRAZ POLYVALENTE	2.0	500	W 000 293 673	1 kg plastic bag

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



CUPROBRAZ V6

General characteristics

Copper-phosphorus filler metal that is less fluid than CUPROBRAZ.

For use on copper and copper alloys only.

This brazing alloy can be used to make widely-spaced joints or tappings.

Economical brazing of copper pipes (not to be used on GDF gas lines).

Read the material safety data sheets before use. These are available at www.safety-welding.com



Applications:

- Specially for tapping
- Sanitary fixtures (hot or cold water)
- Decoration
- Copper boilerwork (boiler tanks and water heaters)
- Self-fluxing alloy on copper.

Note 1: Unlike the majority of filler metals mentioned in standard EN 1044, which only flow in a satisfactory manner at, near or above the liquidus temperature, most copper-phosphorus filler metals are sufficiently fluid to enable brazing at a temperature well below the liquidus.

Note 2: It is not recommended to use these filler metals with ferrous metals, nickel alloys or copper alloys containing nickel.

Standards

EN 1044-1999: CP 203
EN ISO 3677: B-Cu94P-710/890
NF A 81362
DIN 8513: L-CuP6

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used when working on copper alloys.

After brazing, any residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS:



Rm (N/mm ² at 20 °C)	A% at 20 °C
550	5

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	P	Melting range: 710 – 890 °C Minimum brazing temperature (approximate): 730 °C
94	6	

TO ORDER:

Filler metal

Product name	 (mm)	 (mm)	Cat. nr	Packaging
CUPROBRAZ V6	2.0	500	W 000 293 679	1 kg plastic box

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



CUPROBRAZ 2 AG, 5 AG, 15 AG

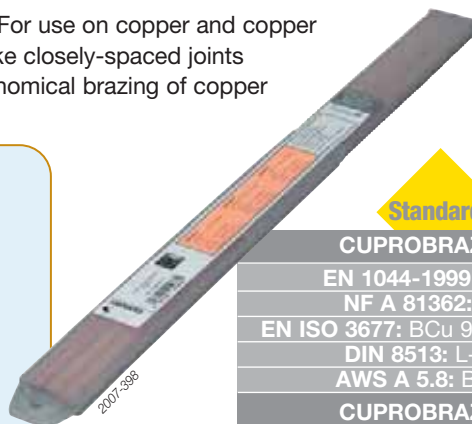
General characteristics

Copper-phosphorus filler metal containing silver. For use on copper and copper alloys only. This brazing alloy can be used to make closely-spaced joints or tappings without remelting existing joints. Economical brazing of copper pipes (not to be used on GDF gas lines).

Read the material safety data sheets before use.
These are available at www.safety-welding.com

Applications:

- Sanitary fixtures (hot or cold water)
- Decoration
- Copper boilerwork (boiler tanks and water heaters)
- Electrical equipment
- Recommended on cooling/air conditioning appliances and pipes
- Self-fluxing alloy on copper.



Standards

CUPROBRAZ 2 AG	
EN 1044-1999:	CP 105
NF A 81362:	06 B1
EN ISO 3677:	BCu 92 PAg 645.825
DIN 8513:	L-Ag 2P
AWS A 5.8:	B Cu P6
CUPROBRAZ 5 AG	
EN 1044-1999:	CP 104
NF A 81362:	06 B2
EN ISO 3677:	BCu 89 PAg 645.815
DIN 8513:	L-Ag 5P
AWS A 5.8:	B Cu P3
CUPROBRAZ 15 AG	
EN 1044-1999:	CP 102
NF A 81362:	05 B1
EN ISO 3677:	BCu 80 PAg 645.800
DIN 8513:	L-Ag 15P
AWS A 5.8:	B Cu P5

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used when working on copper alloys.

After brazing, any residual flux should be removed by cleaning with very hot water.

NNote 1: Unlike the majority of filler metals mentioned in standard EN 1044, which only flow in a satisfactory manner at, near or above the liquidus temperature, most copper-phosphorus filler metals are sufficiently fluid to enable brazing at a temperature well below the liquidus.

Note 2: It is not recommended to use these filler metals with ferrous metals, nickel alloys or copper alloys containing nickel.

MECHANICAL CHARACTERISTICS:

The mechanical characteristics vary with the technical conditions of use:

- High strength, susceptible to fatigue
- Silver content increases ductility and electrical conductivity.

	Rm (N/mm ² at 20 °C)	A% at 20 °C
CUPROBRAZ 2 AG	550	6
CUPROBRAZ 5 AG	570	17
CUPROBRAZ 15 AG	650	10

CHEMICAL ANALYSIS % (wire analysis, typical):

CUPROBRAZ 2 AG					CUPROBRAZ 5 AG					CUPROBRAZ 15 AG				
Cu	P	Ag	Melting range	Minimum brazing temperature (approximate)	Cu	P	Ag	Melting range	Minimum brazing temperature (approximate)	Cu	P	Ag	Melting range	Minimum brazing temperature (approximate)
92	6	2	645 - 825 °C	740 °C	89	6	5	645 - 815 °C	710 °C	80	5	15	645 - 800 °C	700 °C

TO ORDER:

Filler metal

Product name	Ø (mm)	ℓ (mm)	Cat. nr	Packaging
CUPROBRAZ 2 AG	2.0	500	W 000 293 682	1 kg plastic box
CUPROBRAZ 5 AG	2.0	500	W 000 293 686	1 kg plastic box
CUPROBRAZ 15 AG	2.0	500	W 000 293 696	1 kg plastic box

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



CUPROBRAZ 6 AG-2 (specially for Gaz De France pipe work)

General characteristics

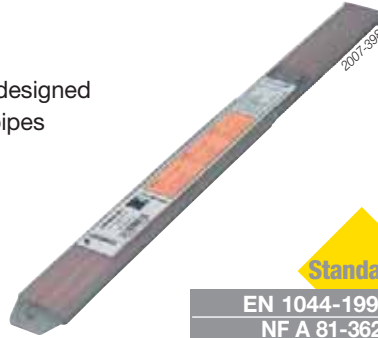
Copper-phosphorus filler metal with 6% silver.
Highly fluid brazing alloy with a broad melting range designed for the capillary brazing of copper and copper alloy pipes and tubes.
Excellent mechanical characteristics.

Applications:

- Domestic gas fuel installations, covered by specification ATG B.524-3)
- Refrigeration and air conditioning industry
- Electrical equipment.

Note 1: Unlike the majority of filler metals mentioned in standard EN 1044, which only flow in a satisfactory manner at, near or above the liquidus temperature, most copper-phosphorus filler metals are sufficiently fluid to enable brazing at a temperature well below the liquidus.

Note 2: It is not recommended to use these filler metals with ferrous metals, nickel alloys or copper alloys containing nickel.



Read the material safety data sheets before use.
These are available at www.safety-welding.com

Standards

EN 1044-1999: CP 103
NF A 81-362: 07 B 3
EN ISO 3677:
B-Cu 87 PAg (Ni) - 645/725

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

FONDANT SILVER G-2 (paste) flux must be used when working on copper alloys.

After brazing, any residual flux should be removed by cleaning with very hot water.

CHEMICAL ANALYSIS % (wire analysis, typical):

Cu	P	Ag
87	7	6

Melting range: 645 – 725 °C
Minimum brazing temperature (approximate): 690 °C

APPROVALS / ACCREDITATIONS



ATG: The CUPROBRAZ 6 AG-2 and FONDANT SILVER G-2 (paste) combination is ATG-accredited for use on copper installations covered by specification ATG B.524-3. Must be used with FONDANT SILVER G-2 flux.

TO ORDER:

Filler metal

Product name	\varnothing (mm)	l (mm)	Cat. nr	Packaging
CUPROBRAZ 6 AG-2	2.0	500	W 000 272 286	250 g plastic box
CUPROBRAZ 6 AG-2	2.0	500	W 000 272 429	1 kg plastic box

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot



SILVER 200 CF, 200 E CF

Characteristics

- Cadmium-free filler metal with 20% silver
- Brazing alloy with a broad melting range that can be used in joints where the gaps are relatively wide for brazing
- Brazing alloy designed for joints subjected to prolonged heating or where large beads or long fillets are required
- Good fluidity
- Precautions for use: the brazed parts must be cooled slowly in air to avoid joint cracking.

Cadmium Free



Read the material safety data sheets before use. These are available at www.safety-welding.com

Standards

EN 1044-1999: AG 104
DIN 8513: L-AG

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

Applications:

- Brazing of all metals (except aluminium)
- Refrigeration and air conditioning industries
- Repair and maintenance

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used with SILVER 200.

SILVER 200 E has a supple, non-brittle green coating.

This coating replaces the flux, reduces metal oxides and facilitates wetting. After brazing, residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS OF THE DEPOSITED METAL:

Rm (N/mm ² at 20 °C)	A% at 20 °C	Density
430	25	8.4

Format - Coating	
SILVER	
200	20% silver
	Bare rod
E	Supple flux-coated rod
CF	Cadmium Free, compliant with the RoHS directive

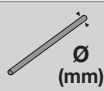
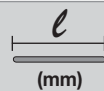

CHEMICAL ANALYSIS % (wire analysis, typical):

Ag	Cu	Si	Zn
20	44	0.2	35.8

Melting range:
690 – 810 °C

TO ORDER:

Filler metal

Product name	 (mm)	 (mm)	 kg	Cat. nr	Packaging
SILVER 200	2.0	500	250 g	W 000 293 607	Plastic box (approx. 250 g)
SILVER 200	3.0	500	250 g	W 000 293 610	Plastic box (approx. 250 g)
SILVER 200 E	1.5	500	250 g	W 000 293 613	Plastic box (approx. 250 g)
SILVER 200 E	2.0	500	250 g	W 000 293 616	Plastic box (approx. 250 g)

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



SILVER 340 CF, 340 E CF

Characteristics

- Cadmium-free filler metal with 34% silver
- Brazing alloy with a broad melting range that can be used in joints where the gaps are relatively wide for brazing
- Brazing alloy designed for joints subjected to prolonged heating or where large beads or long fillets are required
- Good fluidity
- Precautions for use: the brazed parts must be cooled slowly in air to avoid joint cracking.

Cadmium Free



Read the material safety data sheets before use. These are available at www.safety-welding.com

Standards

EN 1044-1999: AG 106

DIN 8513: L-AG 34 SN

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

Applications:

- Brazing of all metals (except aluminium)
- Refrigeration and air conditioning industries
- Repair and maintenance

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used with SILVER 340.

SILVER 340 E has a supple, non-brittle green coating.

This coating replaces the flux, reduces metal oxides and facilitates wetting. After brazing, residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS OF THE DEPOSITED METAL:

Rm (N/mm ² at 20 °C)	A% at 20 °C	Density
460	25	8.7

Format - Coating

SILVER	
340	34% silver
	Bare rod
E	Supple flux-coated rod
CF	Cadmium Free, compliant with the RoHS directive

CHEMICAL ANALYSIS % (wire analysis, typical):

Ag	Cu	Sn	Zn
34	36	3	27

Melting range:
630 – 730 °C

TO ORDER:

Filler metal

Product name	\varnothing (mm)	l (mm)	kg	Cat. nr	Packaging
SILVER 340	1.5	500	250 g	W 000 293 800	Plastic box (approx. 250 g)
SILVER 340	2.0	500	250 g	W 000 293 803	Plastic box (approx. 250 g)
SILVER 340 E	1.5	500	250 g	W 000 293 806	Plastic box (approx. 250 g)
SILVER 340 E	2.0	500	250 g	W 000 293 809	Plastic box (approx. 250 g)

Flux

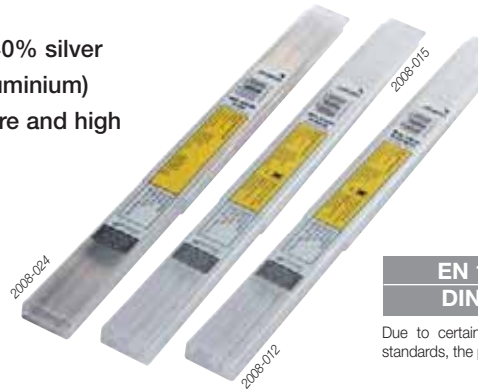
Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



SILVER 400 CF, 400 E CF, 400 EM CF

Characteristics:

- Cadmium-free filler metal with 40% silver
- Brazing of all metals (except aluminium)
- All work demanding extreme care and high mechanical characteristics
- Very good fluidity
- Precautions for use: the brazed parts must be cooled slowly in air to avoid joint cracking.



Cadmium Free

Standards

EN 1044-1999: AG 105
DIN 8513: L-AG 40 SN

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

Applications:

- Maintenance
- Sanitary plumbing
- Refrigeration industries

Read the material safety data sheets before use. These are available at www.safety-welding.com

FLAME FILLER METALS

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used with SILVER 400.

SILVER 400 E has a supple, non-brittle white coating. SILVER 400 EM has a thin, flexible, non-brittle white coating.

This coating replaces the flux, reduces metal oxides and facilitates wetting. After brazing, residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS OF THE DEPOSITED METAL:

Rm (N/mm ² at 20 °C)	A% at 20 °C	Density
480	30	9.1

Format - Coating


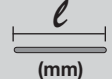

SILVER	
400	40% silver Bare rod
E	Supple flux-coated rod
EM	Rod with thin, flexible flux coating
CF	Cadmium Free, compliant with the RoHS directive

CHEMICAL ANALYSIS % (wire analysis, typical):

Ag	Cu	Sn	Zn	Melting range: 650 – 710 °C
40	30	2	28	

TO ORDER:

Filler metal

Product name	 (mm)	 (mm)	 kg	Cat. nr	Packaging
SILVER 400 CF	1.0	500	250 g	W 000 293 812	Plastic box (approx. 250 g)
SILVER 400 CF	1.5	500	250 g	W 000 293 815	Plastic box (approx. 250 g)
SILVER 400 CF	2.0	500	250 g	W 000 293 818	Plastic box (approx. 250 g)
SILVER 400 CF	3.0	500	250 g	W 000 293 821	Plastic box (approx. 250 g)
SILVER 400 E CF	1.5	500	250 g	W 000 293 824	Plastic box (approx. 250 g)
SILVER 400 E CF	2.0	500	250 g	W 000 293 827	Plastic box (approx. 250 g)
SILVER 400 EM CF	1.5	500	250 g	W 000 293 830	Plastic box (approx. 250 g)
SILVER 400 EM CF	2.0	500	250 g	W 000 293 833	Plastic box (approx. 250 g)

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot

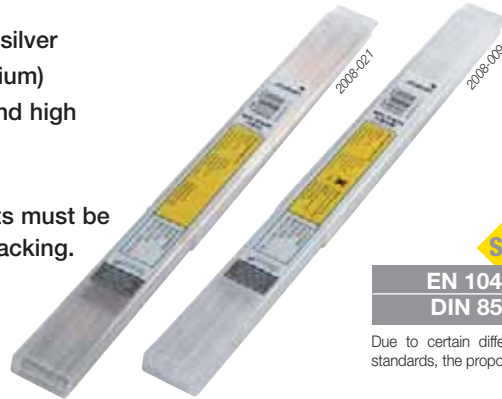


SILVER 450 CF, 450 E CF

Characteristics:

- Cadmium-free filler metal with 45% silver
- Brazing of all metals (except aluminium)
- All work demanding extreme care and high mechanical characteristics
- Very good fluidity
- Precautions for use: the brazed parts must be cooled slowly in air to avoid joint cracking.

Cadmium Free



Read the material safety data sheets before use. These are available at www.safety-welding.com

Standards

EN 1044-1999: AG 104
DIN 8513: L-AG 34 SN

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

- Applications:**
- Maintenance
 - Refrigeration industries
 - Plumbing & sanitary fixtures with difficult access
 - Food contact parts and wine production

FONDANT SILVER G-2 (paste) or BRASOFLUX (powder) flux must be used with SILVER 450.

SILVER 450 E has a supple, non-brittle white coating.

This coating replaces the flux, reduces metal oxides and facilitates wetting. After brazing, residual flux should be removed by cleaning with very hot water.

MECHANICAL CHARACTERISTICS OF THE DEPOSITED METAL:

Rm (N/mm ² at 20 °C)	A% at 20 °C	Density
500	25	9.1

Format - Coating	
SILVER	
450	45% silver
	Bare rod
E	Supple flux-coated rod
CF	Cadmium Free, compliant with the RoHS directive

CHEMICAL ANALYSIS % (wire analysis, typical):

Ag	Cu	Sn	Zn
45	27	2	26

Melting range: 640 – 680 °C

TO ORDER:

Filler metal

Product name	Ø (mm)	ℓ (mm)	kg	Cat. nr	Packaging
SILVER 450 CF	2.0	500	250 g	W 000 293 842	Plastic box (approx. 250 g)
SILVER 450 CF	3.0	500	250 g	W 000 293 845	Plastic box (approx. 250 g)
SILVER 450 E CF	1.5	500	250 g	W 000 293 836	Plastic box (approx. 250 g)
SILVER 450 E CF	2.0	500	250 g	W 000 293 839	Plastic box (approx. 250 g)

Flux

Product name	Type	Cat. nr	Packaging
FONDANT SILVER G-2	Paste	W 000 272 290	200 g pot
BRASOFLUX	Powder	W 000 293 745	200 g pot



SILVER 560 E CF

Characteristics:

- Cadmium-free filler metal with 56% silver
- Brazing of all metals (except aluminium)
- Specially for food-grade and wine production equipment
- Very high fluidity
- Precautions for use: the brazed parts must be cooled slowly in air to avoid joint cracking.

Cadmium Free



Read the material safety data sheets before use. These are available at www.safety-welding.com

Applications:

- Pure gas and medical fluid lines
- Brazing of steels, including stainless steels, and copper alloys
- Maintenance
- Refrigeration industry

Standards

EN 1044-1999: AG 102
DIN 8513: L-Ag 56 Sn

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

SILVER 560 E CF has a supple, non-brittle pink coating.

This coating replaces the flux, chemically reduces metal oxides and facilitates wetting.

After brazing, residual flux should be removed by cleaning with very hot water.

Format - Coating

SILVER	
560	56% silver
E	Supple flux-coated rod
CF: Cadmium Free	Compliant with the RoHS directive

MECHANICAL CHARACTERISTICS OF THE DEPOSITED METAL:

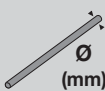


Rm (N/mm ² at 20 °C)	A% at 20 °C	Density
420	30	9.1

CHEMICAL ANALYSIS % (wire analysis, typical):

Ag	Cu	Sn	Zn
56	22	5	17

Melting range: 620 – 655 °C

TO ORDER:

 (mm)	 (mm)	 (kg)	Cat. nr	Packaging
1.5	500	250 g	W 000 293 848	Plastic box (approx. 250 g)
2.0	500	250 g	W 000 293 657	Plastic box (approx. 250 g)



FILETAIN ARGENT

General characteristics

Tin solder with controlled melting range.

Read the material safety data sheets before use. These are available at www.safety-welding.com

Applications:

- Recommended for soldering copper and zinc, and also in electronics for soldering tin-free brass
- FILETAIN ARGENT contains NO LEAD. This solder is specially intended for the soldering of electrical circuits (terminal lugs, etc.), good electrical conductivity and good mechanical strength (in accordance with RoHS directive 2005/95/EC of 27 January 2003).
- PATETAIN G flux must be used with FILETAIN ARGENT.

Standards

None

CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Ag	Melting point: 221 °C
96.5	3.5	

TO ORDER

Filler metal

Product name	 (mm)	Cat. nr	Packaging
FILETAIN ARGENT	2.0	W 000 293 534	Wire on plastic spool containing 200 g

Flux

Product name	Type	Cat. nr	Packaging
PATETAIN G	Paste	W 000 293 748	200 g plastic pot



FILETAIN CUIVRE

General characteristics

Tin solder with controlled melting range.

Applications:

- Recommended for soldering copper and zinc, and also in electronics for soldering tin-free brass
- FILETAIN CUIVRE contains NO LEAD. This solder is specially intended for the soldering of electrical circuits (terminal lugs, etc.), good electrical conductivity and good mechanical strength (in accordance with RoHS directive 2005/95/EC of 27 January 2003).
- PATETAIN G flux must be used with FILETAIN CUIVRE.

Read the material safety data sheets before use. These are available at www.safety-welding.com

Standards

None


FLAME FILLER METALS

CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Cu	Melting range: 227 – 320 °C
97	3	

TO ORDER:

Filler metal

Product name	 (mm)	Cat. nr	Packaging
FILETAIN CUIVRE	2.0	W 000 293 531	Flux-cored wire on plastic spool containing 500 g

Flux

Product name	Type	Cat. nr	Packaging
PATETAIN G	Paste	W 000 293 748	200 g plastic pot



FILETAIN 40 R

General characteristics

Tin solder with controlled melting range.

Applications:

- Recommended for soldering zinc.
- This product is designed for the repair of electrical and electronic equipment marketed prior to 1 July 2006 to encourage their re-use.
- FILETAIN 40 R comprises an activated resin flux core.

Read the material safety data sheets before use. These are available at www.safety-welding.com

CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Pb	Melting range: 185 – 235 °C Melting point: 185 °C
40	60	

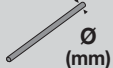
Standards

NF A 81.361: BPb 60 Sn 185-235
DIN 1707: L-Pb Sn 40
ASTM B 32.83: Sn 40 A
BS 219: Alloy G
QQS 971 C (USA)

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

TO ORDER:

Filler metal

Product name	 Ø (mm)	Cat. nr	Packaging
FILETAIN 40 R	1.5	W 000 293 506	Flux-cored wire on plastic spool containing 500 g
FILETAIN 40 R	2.0	W 000 293 509	Flux-cored wire on plastic spool containing 500 g
FILETAIN 40 R	2.0	W 000 293 511	Flux-cored wire on plastic spool containing 250 g
FILETAIN 40 R	2.0	W 000 293 513	Flux-cored wire on plastic spool containing 100 g
FILETAIN 40 R	3.0	W 000 293 516	Flux-cored wire on plastic spool containing 500 g

Flux

Product name	Type	Cat. nr	Packaging
PATETAIN G	Paste	W 000 293 748	200 g plastic pot



FILETAIN 50

General characteristics

Tin solder with controlled melting range.

Applications:

- Recommended for soldering zinc.
- This product is designed for the repair of electrical and electronic equipment marketed prior to 1 July 2006 to encourage their re-use.
- Must be used with PATETAIN G flux.

Read the material safety data sheets before use. These are available at www.safety-welding.com

Standards

NF A 81 361: B Pb 50 Sn 185-235
DIN 1707: LPb Sn 50
ASTM B 32.83: Sn 50 A

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Pb
50	50

Melting range: 183 – 216 °C
Brazing temperature (approximate): 183 °C

TO ORDER:

Filler metal

Product name	 (mm)	Cat. nr	Packaging
FILETAIN 50	2.0	W 000 293 519	Wire on plastic spool containing 500 g

Flux

Product name	Type	Cat. nr	Packaging
PATETAIN G	Paste	W 000 293 748	200 g plastic pot



FILETAIN 60 R

General characteristics

Highly fluid tin-lead alloy.

Applications:

- Low temperature solder recommended for applications requiring limited heating (tinning baths).
- This product is designed for the repair of electrical and electronic equipment marketed prior to 1 July 2006 to encourage their re-use.
- FILETAIN 60 R has an activated resin flux core.

Standards

NF A 81.361: BPb 60 Sn 185-190
DIN 1707: LSn 60 Pb
ASTM B 32.83: Sn 60 B
BS 219: Alloy KP
QQS 971 C (USA): Sn 60

Due to certain differences with the corresponding standards, the proposed classification is not absolute.

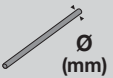
CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Pb	Melting range: 185 – 190 °C
60	40	

Read the material safety data sheets before use.
These are available at www.safety-welding.com

TO ORDER:

Filler metal

Product name	 (mm)	Cat. nr	Packaging
FILETAIN 60 R	1.0	W 000 293 522	Flux-cored wire on plastic spool containing 500 g
FILETAIN 60 R	1.5	W 000 293 525	Flux-cored wire on plastic spool containing 500 g
FILETAIN 60 R	2.0	W 000 293 528	Flux-cored wire on plastic spool containing 500 g



ETAIN 33

General characteristics

Tin solder with broad melting range.

Applications:

- Alloy used for plumbing and sheet metalwork applications.
- Must be used with PATETAIN G flux.

Read the material safety data sheets before use. These are available at www.safety-welding.com

CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Pb
33	67

Melting range: 183 – 250 °C
Melting point: 183 °C

Standards

NF A 81.361/362: BPb 67 Sn 183-250
DIN 1707: L-Pb Sn 33
ASTM B 32.83: Sn 35 B
ASTM 219: Alloy L



Due to certain differences with the corresponding standards, the proposed classification is not absolute.



FLAME FILLER METALS

TO ORDER:

Filler metal

Product name	 (mm)	 (mm)	Cat. nr	Packaging
ETAIN 33	Ø 10	350	W 000 293 503	Cast rods

Flux

Product name	Type	Cat. nr	Packaging
PATETAIN G	Paste	W 000 293 748	200 g plastic pot



PATETAIN S

General characteristics

Tin soldering paste with controlled melting range.
Apply with a brush.
Usable with all types of flame.

Applications:

- Soldering paste used to tin any clean copper, zinc, iron or lead surface directly and then “charge” with the tin rod.
- PATETAIN S is ready to use as it contains flux.

Read the material safety data sheets before use.
These are available at www.safety-welding.com

Standards

None

CHEMICAL ANALYSIS % (wire analysis, typical):

Sn	Pb
30	70

Melting temperature: 185 °C

TO ORDER:

Filler metal

Product name	Cat. nr	Packaging
PATETAIN S	W 000 293 727	500 g pot



Brazing / Soldering fluxes

Use of a flux is necessary for brazing, soldering and braze welding, but less so for welding.

The surfaces intended to be joined by welding, braze welding, brazing and soldering must in all cases be cleaned beforehand. As soon as the parts to be assembled heat up, oxides are created thus forming an obstacle to the “wetting” of the filler metal.

The flux indicates the right temperature required to make the joint. After joining, residual flux should be removed by cleaning with very hot water.


Flux is used to:

- Dissolve remaining oxides before and during assembly
- Encourage the wetting of the filler metal
- Protect the surfaces to be joined and the filler metal from oxidation by forming a continuous film
- Reinforce the characteristics of the deposited metal in certain cases.

Read the material safety data sheets before use. These are available at www.safety-welding.com



TO ORDER:

Product name	Type	Cat. nr	Packaging	Application
SOUDBRONZE	Powder	W 000 293 730	200 g pot	Braze welding of steel, galvanized steel, cast iron, copper and copper alloys
ODAL	Powder	W 000 293 738	200 g pot	Braze welding of aluminium and aluminium alloys
BRASOFLUX	Powder	W 000 293 745	200 g pot	Brazing of all common metals (except aluminium) Used with all types of filler metal
FONDANT SILVER G-2 	Paste	W 000 272 290	200 g pot	Silver brazing of ferrous and copper metals. ATG-approved flux as per specification B.524-3
PATETAÏN G	Paste	W 000 293 748	200 g pot	Flux paste for tin soldering and tinning
PATETAÏN S	Paste	W 000 293 727	200 g pot	Tin/lead alloy-based tinning paste containing flux