SALDFLUX™

PRODUCT CATALOGUE

BRAZING ALLOYS

SOFT SOLDERS

FLUXES

SPECIAL BRAZING PASTES



OUR COMPANY

SaldFlux Srl is an Italian company which manufactures and provides silver brazing alloys specifically developed for every industrial application in compliance with the main technical and environmental international standards. "Our goal is to meet all of our customers' requirements: flexibility in the production process, continuous research, improvement and training of our staff." Our products are subject to a strict quality assessment, are tested internally in our laboratory by means of the most advanced analysis equipment. The single product is controlled and monitored by us since melting to packaging.

OUR HISTORY

SaldFlux srl was founded in 1985 by Eng. **Vittorio Tura**, chasing the dream of a lifetime dedicated to brazing; this dream is now carried on with passion, professionalism and determination by his sons Alberto and Andrea. **SaldFlux srl** is a leader in the production of consumables for brazing, soldering and brazewelding; it's a modern company, totally oriented to the market and the customer.

SALDFLUX SRL

«BRAZING ALLOYS & FLUXES»




PROMPT
DELIVERY
HIGH
STANDARD
OF QUALITY
CUTTING-EDGE
TECHNOLOGY

OUR PRODUCTS

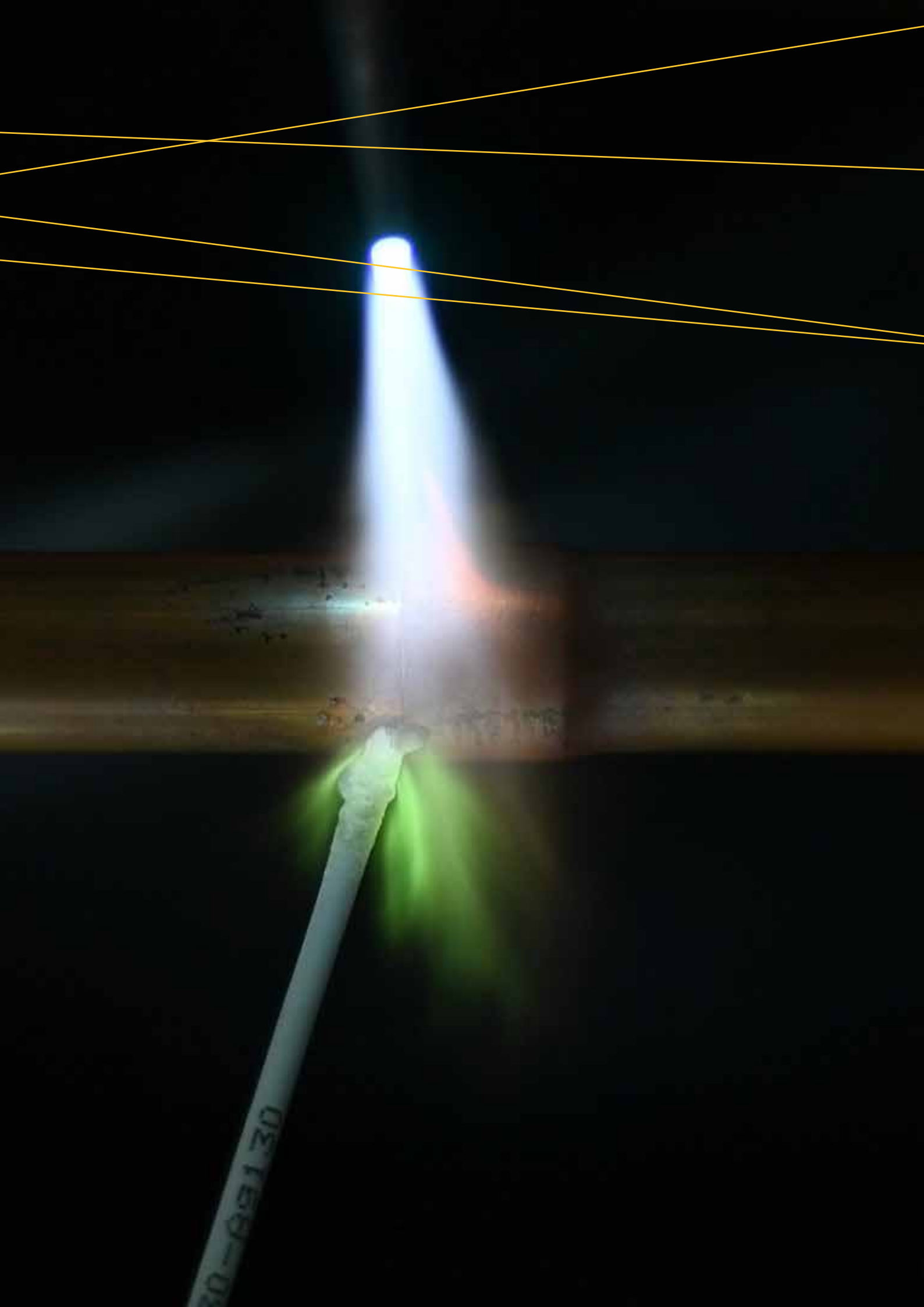
SaldFlux Srl offers a complete range of:

- Cadmium-free silver brazing alloys
- Brazing alloys for special applications
- Brazing alloys containing Nickel
- Carbide brazing alloys Copper-phosphorus alloys
- Brass alloys
- Aluminium alloys
- Soft solders
- Fluxes
- Fluxcoated rods
- Equipment

These alloys for low and high temperature brazing are supplied in different forms (wires, bars, strips, preforms) and in different diameters.
Saldflux is also specialized in the production of fluxes made in full compliance with the REACH regulation (CE nr. 1207/2006).
SaldFlux has grown a particular know-how in producing the flux-coating for filler metal alloys both for industrial maintenance (**FLUXALLOY** – half flexible) and for production purpose (**SALDFLOW** – non-flexible). All of our coatings are realized with non-toxic and boric acid free fluxes, according to REACH and RoHS regulations.

APPLICATIONS

- Air conditioning and refrigeration
- Radiators, boilers and heating systems
- Medical devices and systems
- Brazed carbide tipped tools
- Heat exchangers
- Glasses and musical instruments
- Electromechanical constructions
- Industrial applications
- Jewelry and silverware
- Automotive sector
- Shipyards
- Lighting



BRAZING SOLUTIONS
FOR INDUSTRY

STRONG POINTS

COMPETENCE

SaldFlux supports its customers in selecting the most suitable filler metals thanks to its long-standing experience (more than 30 years) in the field of brazing and to the proficiency and expertise of the staff.

LIABILITY

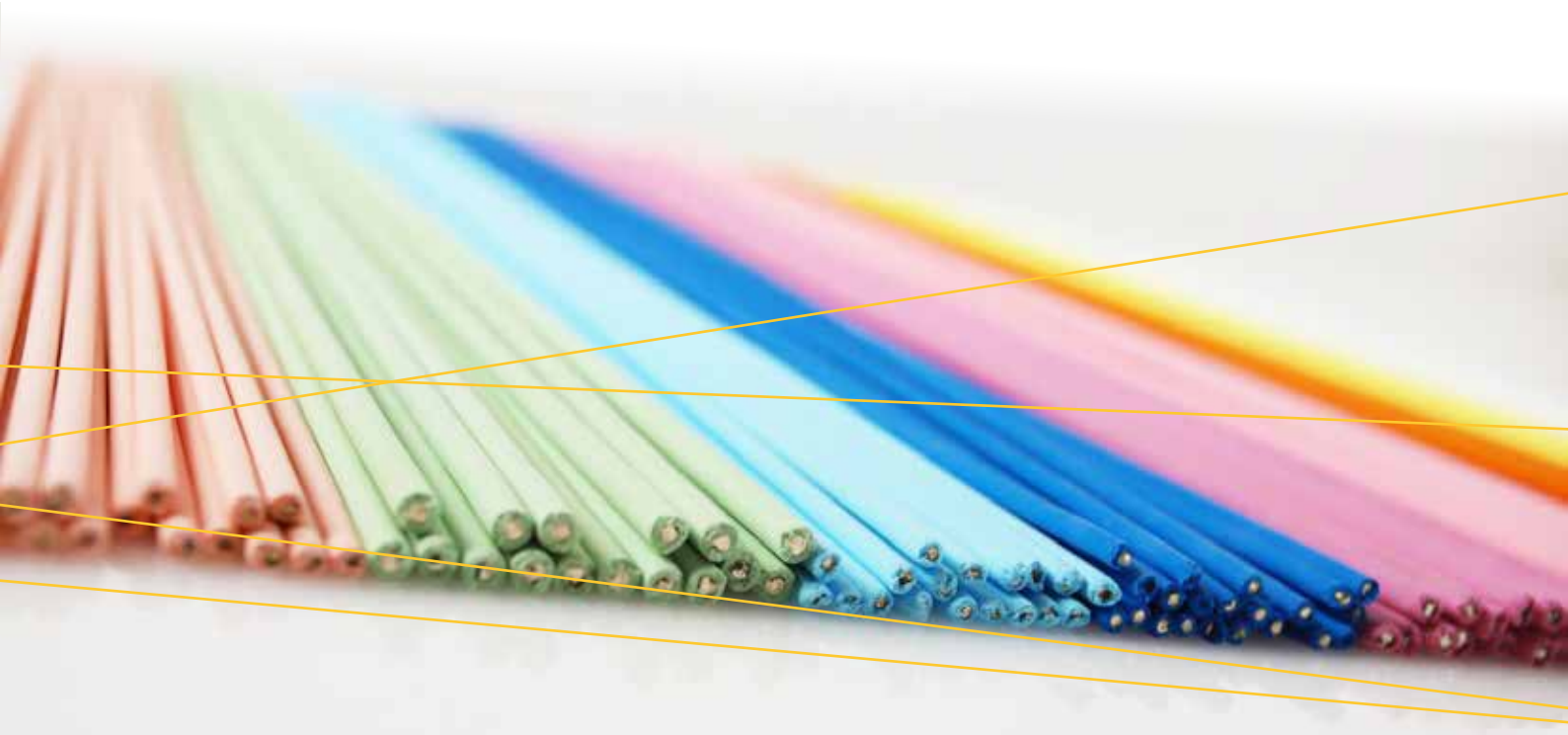
The on-site realization of the entire production process guarantees a constant quality standard over time, a decisive element for the standardization of brazing processes and their certification.

SUPPORT

SaldFlux guarantees customer support along all stages of the process, providing the needed documentation (Safety Data Sheets, Certificate of Analysis, Certificate of Conformity), also satisfying any product customization needs (printing and / or packaging).

CONSULTING

SaldFlux Srl is your ultimate partner for the analysis and rationalization of the production process and will assist customers in product and process certification (BPS).



ternalloy 25
silvalloy 105
fos 677
ternalloy 38
silverfos 2
dullfos 70
weld 1
alusald 12
tinalloy 35
tinsald 9307
ternalloy 405
silverfos 15
dullfos 2
weld 110
alusald 22
ternalloy 467
tinsald 9703

INDEX

1. Cadmium-free silver brazing alloys _____ pag. 14
2. Brazing alloys for special applications _____ pag. 34
3. Brazing alloys containing Nickel _____ pag. 44
4. Carbide brazing alloys – Trimetallic _____ pag. 52
5. Copper-phosphorus alloys _____ pag. 56
6. Brass alloys _____ pag. 72
7. Aluminium alloys _____ pag. 78
8. Soft solders _____ pag. 84
9. Fluxes _____ pag. 92
10. Fluxcoated rods _____ pag. 118

INDEX

	Bare Rods	EN ISO 17672	AWS A5.8	EN ISO 3677
Cadmium-free silver brazing alloys / Ternalloy T	TERNALLOY 25	Ag 125	B-Ag37	
	TERNALLOY 30	Ag 130		
	TERNALLOY 34	Ag 134		
	TERNALLOY 38	Ag 138	B-Ag34	
	TERNALLOY 40	Ag 140	B-Ag28	
	TERNALLOY 45	Ag 145	B-Ag36	
	TERNALLOY 55	Ag 155		
	TERNALLOY 56	Ag 156	B-Ag7	
Cadmium-free silver brazing alloys / Ternalloy S	TERNALLOY 405	Ag 205		
	TERNALLOY 412	Ag 212		
	TERNALLOY 420	Ag 220		
	TERNALLOY 425	Ag 225		
	TERNALLOY 430	Ag 230	B-Ag20	
	TERNALLOY 435	Ag 235	B-Ag35	
	TERNALLOY 444	Ag 244		
	TERNALLOY 445	Ag 245	B-Ag5	
Brazing alloys for special applications	TERNALLOY 460			B-Ag60CuZn-695/730
	TERNALLOY 467			B-Ag67CuZn-665/718
	TERNALLOY 5614	Ag 456a		
	TERNALLOY 6030	Ag 160	BAg-18	
	TERNALLOY 7228	Ag 272a	BAg-8	
	TERNALLOY 8515	Ag 485	Bag-23	
	SILVALLOY 105			B-Ag100
Brazing alloys containing Nickel	TERNALLOY 49 MN	Ag 449		
	TERNALLOY 491 MN			B_Ag49CuZnMnNi
	TERNALLOY 50 N	Ag 450		
	TERNALLOY 40 N	Ag 440		
	TERNALLOY 39 MN			B-Ag39CuZnMnNi
	TERNALLOY 30 N			B_Cu36ZnAgNi
Trimethalics	TERNALLOY 49 TR			B-Ag49CuZnMn(Ni)
	TERNALLOY 49 TR 161			B-Ag49CuZnMn(Ni)

	Bare Rods	EN ISO 17672	AWS A5.8	EN ISO 3677
Copper-phosphorus alloys	FOS 677	CuP 386		
	FOS 60	CuP 179		
	FOS 70	CuP 180		
	FOS 80	CuP 182		
	SILVERFOS 202			B-Cu94PAg-700/850
	SILVERFOS 204			B-Cu94PAg-700/850
	SILVERFOS 2	CuP 279		
	SILVERFOS 280	CuP 280	BCuP-6	
	SILVERFOS 5	CuP 281	BCuP-3	
	SILVERFOS 6	CuP 283	BCuP-4	
	SILVERFOS 15	CuP 284	BCuP-5	
	SILVERFOS 18	CuP 285	BCuP-8	
	DULLFOS® 70	CuP 180		
	DULLFOS® 2	CuP 279		
	DULLFOS® 5	CuP 281		
	DULLFOS® 15	CuP 284		
	SILVERFOS 52	CuP 282		
Brass alloys	WELD 1	Cu 470a		
	WELD 2	Cu 670		
	WELD 105			B-Cu51ZnNiAg(Si)
	WELD 110	Cu 773		
	SILVERWELD 1		B-Cu59ZnAg(Si)	
	CU 100	Cu 110		
Aluminium alloys	ALUSALD 12	Al 112	BAlSi-4	
	ALUSALD 2			S-Zn92Al2
	ALUSALD 22			S-Zn78Al22

TABLES

TERNALLOY T

Cadmium-free alloys are very versatile; they can be used in all brazing operations on steels, cast irons, copper and its alloys, zinc and its alloys. To facilitate their penetration and capillarity, they must be used in combination with fluxes (in powder or paste), according to the different applications. The demand for this type of filler alloys has gradually grown hand in hand with the industry (especially food) becoming aware of the dangers of cadmium-containing alloys.



TERNALLOY 25

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 125
AWS A5.8-92	BAg-37
ISO 3677:1997	B-Cu40ZnAgSn-680/760
DIN 8513	*L-Ag25Sn*
(EN 1044:1999)	*Ag 108*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
25	40	33	2	-	-	-

Technical Data

Melting Point	c.a. 680-760 °C
Working Temperature	c.a. 750 °C
Density	c.a.8,7 gr/cm3
Tensile strength	360 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

This is a good alloy for general purposes. Good fluidity and sufficient capillarity. Indicated for non-ferrous metal, stainless steel, copper, brass except aluminium. Good mechanical properties. Used in refrigeration industry, musical instruments and for general purposes (considering the working temperature of 730°C).

Suggested Flux

F16

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy.

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY 30

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 130
AWS A5.8-92	n.a.
ISO 3677:1997	B-Cu36ZnAgSn-665/755
DIN 8513	*L-Ag30Sn*
(EN 1044:1999)	*AG 107*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
30	36	32	2	-	-	-

Technical Data

Melting Point	c.a. 665 - 755 °C
Working Temperature	c.a. 740° C
Density	c.a. 8,8 gr/cm3
Tensile strength	360 Mpa
Elongation	25%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	+150°C / - 150 °C

Applications

This is a good alloy for general purposes, with good fluidity and sufficient capillarity, generally recommended for non-ferrous metal, stainless steel, copper, brass except aluminum and its alloys. Good mechanical property. it is used in refrigeration industry, musical instruments(considering the working temperature of 740°) and also suggested for food industry.

Suggested Flux

F25 - BRASFLUX®

Base Metals

It is used for joining copper and copper alloys, nickel and nickel alloys, almost any steel.

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 34

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 134
AWS A5.8-92	n.a.
ISO 3677:1997	B-Cu36AgZnSn-630/730
DIN 8513	*L-Ag34Sn*
(EN 1044:1999)	*AG 106*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
34	36	27,5	2,5	-	-	-

Technical Data

Melting Point	c.a. 630 - 730 °C
Working Temperature	c.a. 610 °C
Density	c.a. 9.0g/cm3
Tensile strength	480 Mpa
Elongation	12%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

Ternalloy 34 is a low melting, cadmium-free, silver brazing alloy with good flow characteristics. It can be used to join ferrous, non-ferrous and dissimilar metals and alloys with close joint clearances, such as steel, copper, copper alloys, nickel, nickel alloys.
When brazing in an oxidizing environment a proper flux should be used.
Typical applications are in the automotive, electric, air conditioning and refrigeration industries.

Suggested Flux

F16 - F62

Base Metals

It can be used for brazing any steel, copper and copper based alloy as well as for nickel

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 38

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 138
AWS A5.8-92	BAg-34
ISO 3677:1997	B-Ag38CuZnSn-650/720
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
38	31	29	2	-	-	-

Technical Data

Melting Point	c.a. 650 - 720 °C
Working Temperature	c.a. 720 °C
Density	c.a. 9,1 gr/cm3
Tensile strength	350 Mpa
Elongation	15%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

Ternalloy 38 is a low melting, cadmium-free, silver brazing alloy with good flow characteristics. It can be used to join ferrous, non-ferrous and dissimilar metals and alloys with close joint clearances, such as steel, copper, copper alloys, nickel, nickel alloys.
When brazing in an oxidizing environment a proper flux should be used.
Typical applications are in the automotive, electric, air conditioning and refrigeration industries.

Suggested Flux

F16

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys.

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 40

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 140
AWS A5.8-92	B-Ag28
ISO 3677:1997	B-Ag40CuZnSn-650/710
DIN 8513	*L-Ag40Sn*
(EN 1044:1999)	*Ag 105*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
40	30	28	2	-	-	-

Technical Data

Melting Point	c.a. 650-710 °C
Working Temperature	c.a. 690 °C
Density	c.a. 9,1 gr/cm3
Tensile strength	350 Mpa
Elongation	25%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

This is a low melting silver brazing alloy with very good flow characteristics.
It is used for joining copper and copper alloy, nickel and nickel alloy, almost any steel.
Typical applications are in automotive and in the electric industry.

Suggested Flux

F62 e F16

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy.

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY 45

Brazing alloys, Cadmium Free

EN ISO 17672:2016	AG 145
AWS A5.8-92	BAg-36
ISO 3677:1997	B-Ag45CuZnSn - 640/680
DIN 8513	*L-Ag45Sn*
(EN 1044:1999)	*AG 104*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
45	27	25,5	2,5	-	-	-

Technical Data

Melting Point	c.a. 640 - 680 °C
Working Temperature	c.a. 670 °C
Density	c.a. 9,2 gr/cm3
Tensile strength	350 Mpa
Elongation	10%
Electrical Conductivity	13 m/Ωmm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

This alloy is a low melting silver brazing alloy with excellent characteristics and very good fillet forming quality. It is an excellent substitute to the cadmium-containing filler metals.
Typical applications are in refrigeration and air conditioning, automotive and electric industry.
Suitable to manual or machine feeding.

Suggested Flux

BRASFLUX, F16, F62

Base Metals

Copper and copper alloys, nickel and nickel alloys, almost any steel and stainless steel.

Heat Sources

Manual, induction, semi-automatic and automatic.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY 55

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 155
AWS A5.8-92	n.a.
ISO 3677:1997	B-Ag55ZnCuSn-630/660
DIN 8513	*L-Ag55Sn*
(EN 1044:1999)	*AG 103*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
55	21	22	2	-	-	-

Technical Data

Melting Point	c.a. 630-660°C
Working Temperature	c.a. 660°C
Density	9.4
Tensile strength	350 Mpa
Elongation	25%
Electrical Conductivity	7,0 m/? mm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

It's a low melting silver brazing alloy with very good flow characteristics. It can be used for brazing any steel, copper and copper-based alloys as well as for nickel and nickel-based alloys. Typical applications are in automotive, in the electric industry and in ship maintenance (for joining Cunifer or Yorcalbro) and also in tools industry.

Suggested Flux

BRASFLUX - F62 - F35

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy.

Heat Sources

Flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 56

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 156
AWS A5.8-92	BAg-7
ISO 3677:1997	B-AgCuZnSn - 620/655
DIN 8513	*L-Ag55Sn*
(EN 1044:1999)	*AG 102*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
56	22	17	5	-	-	-

Technical Data

Melting Point	c.a. 620-655°C
Working Temperature	c.a. 650°C
Density	9.5
Tensile strength	430 Mpa
Elongation	25%
Electrical Conductivity	7,0 m/Ωmm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

Ternalloy 56 is a low melting silver-based alloy. It has a very good flowing. It can be used for steel, copper and copper alloys, nickel and nickel alloys. Application: silverware and jewelry; medical systems and precision instruments; electrical industry in general

Suggested Flux

F35

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy.

Heat Sources

Flame

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY S

Cadmium-free alloys are very versatile; they can be used in all brazing operations on steels, cast irons, copper and its alloys, zinc and its alloys. To facilitate their penetration and capillarity, they must be used in combination with fluxes (in powder or paste), according to the different applications. The demand for this type of filler alloys has gradually grown hand in hand with the industry (especially food) becoming aware of the dangers of cadmium-containing alloys. TERNALLOY S alloys are ternary alloys (Ag, Cu, Zn) with a higher working temperature than TERNALLOY T alloys. Some of these are characterized by the presence of Silicon. This element favors and increases the tendency of the filler metals to form a concave and smooth connection at the junction of the brazed joint as it cools. This type of filler alloy can also be used in all brazing operations on steels, cast irons, copper and its alloys, zinc and its alloys.



TERNALLOY 405

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 205
AWS A5.8-92	n.a
ISO 3677:1997	B-Cu55ZnAg(Si) - 820/870
DIN 8513	*n.a.*
(EN 1044:1999)	*AG 208*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
5	55	39,8	-	0,2	-	-

Technical Data

Melting Point	c.a. 820 - 870 °C
Working Temperature	c.a. 870 °C
Density	c.a. 8,4 gr/cm3
Tensile strength	350 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

This is a ternary alloy suggested for strong and resistant brazing. It can be used for brass fittings, steel or cast iron (also oxidized). Yellow colored joint.

Suggested Flux

F25

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy

Heat Sources

Flame, Induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 412

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 212
AWS A5.8-92	n.a.
ISO 3677:1997	B-Cu48ZnAg(Si) - 800/830
DIN 8513	*n.a.*
(EN 1044:1999)	*AG 207*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
12	48	39,8	-	0,2	-	-

Technical Data

Melting Point	c.a. 800 - 830 °C
Working Temperature	c.a. 820 °C
Density	c.a.8,4 gr/cm3
Tensile strength	410 Mpa
Elongation	15%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

For torch brazing on carbon and stainless steel, copper, nickel and its alloys. Used in boiler works for drawed components. The fluidity of this alloy allows good penetration of the alloy and a joint with no porosity.

Suggested Flux

F25

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy

Heat Sources

For torch brazing

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 420

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 220
AWS A5.8-92	n.a.
ISO 3677:1997	B-Cu43ZnAg(Si) - 690/810
DIN 8513	*L-Ag20*
(EN 1044:1999)	*Ag 206*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
20	43,85	36	-	0,15	-	-

Technical Data

Melting Point	c.a. 690 - 810 °C
Working Temperature	c.a. 810 °C
Density	c.a. 8,7 gr/cm3
Tensile strength	145 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 420 is a silver brazing alloy with very good flow characteristics. It is used for joining copper and copper alloys, nickel and nickel alloys, almost any steel.
Typical applications are in automotive and in the electric industry.

Suggested Flux

F25 - F16

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy.

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 425

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 225
AWS A5.8-92	n.a.
ISO 3677:1997	B-Cu40ZnAg-700/790
DIN 8513	*n.a.*
(EN 1044:1999)	*AG 205*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
25	40	35	-	-	-	-

Technical Data

Melting Point	c.a. 700 - 790 °C
Working Temperature	c.a. 770 °C
Density	c.a. 8,8 gr/cm3
Tensile strength	280 /380 Mpa
Elongation	19%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 425 is a filler metal with a good capillarity power and wettability.Particularly suitable for "production on line" and also for maintenance. These alloys can be used as a substitute for Cd bearing alloys. By means of these alloys the users can proceed to make joints on base metal which will be in contact with food or pharmaceutical products. Besides they guarantee a better health safety on the working place, because during brazing process they do not leave dangerous fumes or dust.

Suggested Flux

F25 - F16

Base Metals

Any steel, copper and copper alloy, nickel and nickel alloy

Heat Sources

Oxyacetylene torch with reducing flame. Alloys with a narrow melting range also for furnace

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 430

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 230
AWS A5.8-92	BAg-20
ISO 3677:1997	B-Cu38ZnAg - 680/765
DIN 8513	*(L-Ag30)*
(EN 1044:1999)	*AG 204*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
30	38	32	-	-	-	-

Technical Data

Melting Point	c.a. 680 - 765 °C
Working Temperature	c.a. 760 °C
Density	c.a. 8,8 gr/cm3
Tensile strength	430 Mpa
Elongation	20%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 430 is a filler metal with a good capillarity power and wettability. Particularly suitable for "production line" and also for maintenance. This alloy can be used as a substitute for cadmium bearing alloys. By means of this alloy the users can proceed in making joints on base metal which will be in contact with food or pharmaceutical products.
Besides it guarantees a better health safety on the working place, because during brazing process it does not leave dangerous fumes or dust.

Suggested Flux

BRASFLUX - F16

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys.

Heat Sources

It can be used with flame or induction brazing procedure.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 435

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 235
AWS A5.8-92	BAg-35
ISO 3677:1997	B-Ag35ZnCu-685/775
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
35	32	33	-	-	-	-

Technical Data

Melting Point	c.a. 685 - 755 °C
Working Temperature	c.a. 755 °C
Density	c.a. 8,9 gr/cm3
Tensile strength	430 Mpa
Elongation	15%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 435 is a low melting silver based brazing alloy with excellent flow characteristics. It can be used for brazing any steel, copper and copper-based alloys as well as for nickel and nickel-based alloys. It can be used for flame or induction brazing procedures. Typical applications are found e.g., in automotive and in the electric industry.

Suggested Flux

F16

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys.

Heat Sources

Flame-torch, induction.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 444

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 244
AWS A5.8-92	n.a.
ISO 3677:1997	B-Ag44CuZn - 675/735
DIN 8513	*n.a.*
(EN 1044:1999)	*AG 203*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
44	30	26	-	-	-	-

Technical Data

Melting Point	c.a. 675 - 735 °C
Working Temperature	c.a. 730 °C
Density	c.a. 9,1 gr/cm3
Tensile strength	480 Mpa
Elongation	25%
Electrical Conductivity	11,2 m/Ωmm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

Alloy with excellent capillarity power. Particularly suitable for "works on line". These alloys can be used as a substitute to Cd bearing alloys. Considering that the working temperature of alloys with similar Silver contain (but without Cd) is higher than the one with Cd, by means of these alloys the users can proceed to make joints on base metal which will be in contact with food or pharmaceutical products. Besides they guarantee a better health safety on the working place, because during brazing process they do not leave dangerous fumes or dust.

Suggested Flux

F62-F16 PS

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY 445

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 245
AWS A5.8-92	BAg-5
ISO 3677:1997	B-Ag45CuZn - 665/745
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
45	30	25	-	-	-	-

Technical Data

Melting Point	c.a. 665 - 745 °C
Working Temperature	c.a. 730 °C
Density	c.a. 9,1 gr/cm3
Tensile strength	400 Mpa
Elongation	25%
Electrical Conductivity	11,2 m/Ωmm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

Alloy with excellent capillarity power. Particolary suitable for "works on line". These alloys can be used as a substitute to Cd bearing alloys. Considering that the working temperature of alloys with similar Silver containt (but without Cd) is higher than the one with Cd, by means of these alloys the users can proceed to make joints on base metal which will be in contact with food or pharmaceutical products. Besides they guarantee a better health safety on the working place, because during brazing process they do not leave dangerous fumes or dust.

Suggested Flux

F62 - F16

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys

Heat Sources

It can be used for flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY SPECIAL

Ternalloy Special are brazing alloys for special applications or for use in particular conditions. These are alloys with a high silver content and different composition than the TERNALLOY T and TERNALLOY S alloys.
Zinc-free alloys are suitable for furnace brazing and can be used for brazing stainless steels. Copper-free alloys, on the other hand, are resistant to ammonia. Alloys containing indium are recommended to avoid corrosion phenomena in the case of brazing stainless steels subsequently exposed to moisture or water.



TERNALLOY 460

Brazing alloys, Cadmium Free

EN ISO 17672:2016	n.a.
AWS A5.8-92	n.a.
ISO 3677:1997	B-Ag60CuZn-695/730
DIN 8513	*L-Ag60*
(EN 1044:1999)	*AG 202*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
60	26	14	-	-	-	-

Technical Data

Melting Point	c.a. 695 - 730 °C
Working Temperature	c.a. 710 °C
Density	c.a. 9,5 gr/cm3
Tensile strength	430 Mpa
Elongation	c.a. 16%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

Ternalloy 460 is a Cadmium free alloy with a high silver content with good penetration characteristics. It is widely used in step brazing processes, in combination with alloys with a lower melting temperature. Its reduced zinc content makes it very efficient in brazing processes that require long heating cycles, as the risk of zinc vaporization is reduced to a minimum. Its mechanical strength depends on the base metals, the joint design and its interference.
When used in an oxidizing environment it is necessary to use a specific flux.

Suggested Flux

F25 - F16

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys

Heat Sources

Manual, induction and resistance brazing.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	-	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 467

Brazing alloys, Cadmium Free

EN ISO 17672:2016	n.a.
AWS A5.8-92	n.a.
ISO 3677:1997	B-Ag67CuZn-670/720
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
67	19,5	13,5	-	-	-	-

Technical Data

Melting Point	c.a. 670 - 720 °C
Working Temperature	C.A. 680 °C
Density	c.a. 9,6 gr/cm3
Tensile strength	n.a.
Elongation	c.a 20%
Electrical Conductivity	21,3 m/Ωmm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

Ternalloy 467 is an alloy used primarily for the joining of sterling silver. Ternalloy 467 has a good flow for good filling of fitted joints. The wetting action is relatively poor on non-ferrous metals. Sometimes it is used to join copper and copper alloys which will be drawn or worked after brazing. It is suggested to provide a close colour match with sterling silver. Ternalloy 467 is suggested in step brazing (step brazing is brazing sequence of joints on one assembly using lower brazing temperature for each step to avoid remelting already completed joints). It is suitable for longer heating cycles (i.e., furnace brazing) because of the low zinc content of this kind of silversmith alloy. Ternalloy has a good ductility.

Suggested Flux

Base Metals

Silver and its alloys. Copper and its alloys

Heat Sources

Furnace

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	-	X	-	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY 5614

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 456a
AWS A5.8-92	-
ISO 3677:1997	-
DIN 8513	*-*
(EN 1044:1999)	*AG 403*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	In	Ni
56	27,5	-	-	-	14,5	2

Technical Data

Melting Point	600 - 710 °C
Working Temperature	c.a. 650 °C
Density	9,5 gr/cm3
Tensile strength	
Elongation	25 % c.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	c.a. 720°C

Applications

TERNALLOY 5614 is suggested for in-air brazing of stainless-steel joints exposed to water or moisture in service. It is designed to prevent interfacial (crevice) corrosion, which may result in rapid failure of joint made in stainless steel when exposed to water. It has long melting ranges are not free flowing or easy to use. The most appropriate flux for in-air brazing is fluoride flux compliant to FH 10 (DIN8511), also if the residues are virtually insoluble in water and have to be mechanically removed.

Suggested Flux

F4, F20

Base Metals

non-ferrous metals, steels, stainless steels; hard metals in general (Widia, tungsten

Heat Sources

manual, induction or oven in atmosphere or vacuum

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	-	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 6030

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 160
AWS A5.8-92	BAg-18
ISO 3677:1997	B-Ag60CuSn-600/730
DIN 8513	*L-Ag60Sn*
(EN 1044:1999)	*AG 402*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
60	30	-	10	-	-	-

Technical Data

Melting Point	c.a. 600 - 730° C
Working Temperature	c.a. 720° C
Density	c.a. 9,6 gr/cm3
Tensile strength	-
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	± 200 °C

Applications

Ternalloy 6030 is a zinc-free high silver content alloy with good penetration characteristics.
It is mainly used for brazing in a protected atmosphere oven due to the absence of Zinc (and othe elements with high evaporation). To avoid the evaporation of the silver, when using it in a vacuum oven it is recommended not to exceed the temperature of 900 ° C by much. If used in an oxidizing atmosphere, it is necessary to use a specific flux.
It is widely used for brazing stainless steel joints, when the working environment is characterized by humidity or the operating conditions are in contact with liquids (for example in sea water).
Typical applications are found e.g., in the electricity and air conditioning sector.

Suggested Flux

Base Metals

Used for joints in steel, stainless steel, copper, copper alloys, nickel and nickel alloys.

Heat Sources

It can be used for brazing with flame or induction brazing processes

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 7228

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 272
AWS A5.8-92	BAg-8
ISO 3677:1997	B-Ag72Cu-780
DIN 8513	-
(EN 1044:1999)	*AG 401*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
72	28	-	-	-	-	-

Technical Data

Melting Point	c.a. 780 - 780 °C
Working Temperature	c.a. 780 °C
Density	c.a. 10 gr/cm3
Tensile strength	S235: 340 Mpa; E295:
Elongation	c.a. 17%
Electrical Conductivity	approx. 46,1 m/Omm2
Operating temp. of brazed joint	approx. -200 °C to +200 °C

Applications

TERNALLOY 7228 can be used for brazing unalloyed, low and high alloyed steels, copper and copper-based alloys as well as for nickel and nickel-based alloys.
It is well suitable for brazing under protective atmosphere and under vacuum. The brazing temperature in the furnace is determined by the parent metals. Brazing procedures under vacuum should be done at temperatures not much above 900 °C to avoid evaporation of silver as far as possible. Typical applications are found e.g., in the electric industry (Brazing of metallized ceramic).

Suggested Flux

TBD depending on heat source

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys

Heat Sources

Induction / Furnace in protected atmosphere

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
-	-	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in

TERNALLOY 8515

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 485
AWS A5.8-92	BAg-23
ISO 3677:1997	B-Ag85Mn-960/970
DIN 8513	*L-Ag85Mn*
(EN 1044:1999)	*AG 501*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
85	-	-	-	-	15	-

Technical Data

Melting Point	c.a. 960 - 970° C
Working Temperature	c.a. 970° C
Density	c.a. 9,8 gr/cm3
Tensile strength	-
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	

Applications

Ternalloy 8515 is a high silver content alloy with manganese, with excellent penetration characteristics. It is mainly used for brazing in a protected atmosphere oven; however, the presence of a such a percentage of Mn requires that the reducing atmosphere of the furnace reaches a dew point below - 40 ° C, to obtain a good result.
It is widely used for brazing stainless steel joints, when the working environment is characterized by humidity or the operating conditions are in contact with liquids (for example in sea water). It is also used for brazing ammonia-based refrigeration systems, due to the absence of copper in its formulation, which effectively avoids rapid corrosion.

Suggested Flux

Base Metals

Non-ferrous metals, such as steel, copper, bronze-copper

Heat Sources

Brazing in a controlled atmosphere oven. Induction and resistance brazing.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVALLOY 105

Brazing alloys, Cadmium Free

EN ISO 17672:2016	-
AWS A5.8-92	
ISO 3677:1997	B-Ag100 - 960
DIN 8513	-
(EN 1044:1999)	-

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
99,99	-	-	-	-	-	0,01 -

Technical Data

Melting Point	960° C
Working Temperature	1000 - 1050° C
Density	10,5
Tensile strength	300-380
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	

Applications

Silvalloy 105 is characterized by a single melting point at 960°C; it is widely used as a semiconductor in various electrical, electronic and industrial applications such as contacts, fuse elements, etc., due to its high thermal power and its electrical conductivity.
However, it can also be used in brazing processes due to its excellent ductility and its good resistance to oxidation and corrosive attack.
Silvalloy 105 is also used in the brazing processes of metallized ceramics in reducing or inert atmospheres or under vacuum.

Suggested Flux

-

Base Metals

Non-ferrous metals, with the exception of aluminium and its alloys

Heat Sources

Flame, induction, resistance, Vacuum and inert atmosphere (H, Ar, He, N)

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
-	-	X	X	X	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.



TERNALLOY N

Ternalloy N alloys are specific for brazing hard and hardly "wettable" metals. They are mainly used in the field of hard metal tools, diamond tools, tools for working and cutting wood, tools for working and cutting stone and concrete, saw blades, tools for drilling, excavation and for the mine. The composition of these alloys is characterized by the presence of small percentages of nickel and / or manganese, which favor wettability.
Some of these alloys due to their particular composition can also be used in other sectors where the characteristics of the filler metals do not allow the use of TERNALLOY T and TERNALLOY S.



TERNALLOY 49MN

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 449
AWS A5.8-92	n.a.
ISO 3677:1997	BAg-22
DIN 8513	*n.a.*
(EN 1044:1999)	*AG 502*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
49	16	23	-	-	7,5	4,5

Technical Data

Melting Point	c.a. 680 - 705 °C
Working Temperature	c.a. 690 °C
Density	8,88 gr/cm3
Tensile strength	250 - 300 Mpa
Elongation	n.a.
Electrical Conductivity	5,70 m/Ωmm²
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 49MN is a low melting silver brazing alloy with excel
high mechanical resistance. It is mainly employed for brazing of c
difficult to wet such as tungsten, chromium, tantalum and titanium. Typical applications are in tool industry. The suitable fluxes are F9 paste (suggested during a brazing process by induction) and F4 paste (suggested for all the other applications).

Suggested Flux

F9 PS - F4 PS

Base Metals

Steels. Also tungsten, molybdenum, tantalum and chromium; cemented carbides.

Heat Sources

It can be used in brazing procedures by flame or induction.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TERNALLOY 491 MN

Brazing alloys, Cadmium Free

EN ISO 17672:2016	n.a.
AWS A5.8-92	n.a.
ISO 3677:1997	B-Ag49CuZnMnNi-670/68(
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
49	27	21	-	-	2,5	0,5

Technical Data

Melting Point	c.a. 670 - 690 °C
Working Temperature	c.a. 690 °C
Density	c.a. 9,0 gr/cm3
Tensile strength	250 - 300 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 491 MN is a low melting silver brazing alloy with excellent flow characteristics and high mechanical resistance. It is mainly employed for brazing of cemented carbides and materials difficult to wet such as tungsten, chromium, tantalum and titanium.
Typical applications are in tool industry. It can be used in brazing procedures by flame or induction. The suitable fluxes are F9 paste (suggested during a brazing process by induction) and F4 paste (suggested for all the other applications).
In the form of trimetallic it is supplied both with the ratio 1: 2: 1 and in the more performing 1: 6: 1.

Suggested Flux

F4, F9

Base Metals

Steels, plain and alloyed. Also tungsten, molybdenum, tantalum and chromium; cemented

Heat Sources

Flame, induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	X	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 50 N

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 450
AWS A5.8-92	BAg-24
ISO 3677:1997	-
DIN 8513	*n.a*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
50	20	28	-	-	-	2

Technical Data

Melting Point	660-705°C
Working Temperature	c.a. 670 °C
Density	9,4 gr/cm3
Tensile strength	250 Mpa
Elongation	30%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

TERNALLOY 50 N finds its use in joining of stainless steels used by the food-handling industries in situation where "tight" joints are present. This alloy has 2% nickel, which offers higher strength and better wetting to steel than any of the other standard Cd-Free alloys available, thus enhancing the final braze joint. It contains no tin and, thus, while not as ductile as TERNALLOY 45, it is not subject to the information of brittle intermetallic.

Suggested Flux

F4 - F25 - F9

Base Metals

Nickel and copper alloys

Heat Sources

Torch- flame brazing / Induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	X	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in

TERNALLOY 40 N

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 440
AWS A5.8-92	BAg-4
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
40	30	28	-	-	-	2

Technical Data

Melting Point	c.a. 670 - 780 °C
Working Temperature	c.a. 760 °C
Density	c.a. 8,8 gr/cm3
Tensile strength	150-300
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C/+200°C

Applications

Ternalloy 40N, as Ternalloy 50N, is used extensively for little carbide tip brazing, but flows less than Ternalloy 50N. This alloy has 2% nickel, which offers higher strength and better wetting to steel than any of the other standard Cd-Free alloys available, thus enhancing the final braze joint. It contains no tin and, thus, it is not subject to the formation of brittle intermetallic.

Suggested Flux

F4 - F25 - F9

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys

Heat Sources

Torch- flame brazing / Induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	X	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 39 MN

Brazing alloys, Cadmium Free

EN ISO 17672:2016	n.a.
AWS A5.8-92	n.a.
ISO 3677:1997	B-Ag39CuZnMnNi 670/720
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	
39	30	-	-	-	31 (Zn+Ni+Mn)

Technical Data

Melting Point	c.a. 670 - 720 °C
Working Temperature	c.a. 690 °C
Density	8,9 gr/cm3
Tensile strength	250-300 Mpa
Elongation	20%
Electrical Conductivity	5,70 m/? mm²
Operating temp. of brazed joint	c.a. 700° C

Applications

Silver based alloy with excellent fluidity, capillarity and mechanical resistance. Suitable for brazing cemented carbides and difficult to wet materials such as tungsten, molybdenum, tantalum and chromium.
The presence of Manganese and Nickel increases the corrosion resistance properties of the alloy and guarantees greater mechanical resistance of the brazed joint.
Normally the mechanical resistance of TERNALLOY 39 MN exceeds that of the base metals, even if this is however influenced by some elements of the brazing process.
If not used in a reducing atmosphere, it requires the use of a specific flux.

Suggested Flux

F9 PS - F4 PS

Base Metals

Carbon steels and steel alloys. Also tungsten and molybdenum, tantalum and chromium;

Heat Sources

Flame or induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	X	X	X	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TERNALLOY 30 N

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Ag 230a
AWS A5.8-92	n.a.
ISO 3677:1997	B-CuZnAgNi 676-788
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
30	36	31,9	-	0,1	-	2

Technical Data

Melting Point	675-790° C
Working Temperature	780° C
Density	9.17
Tensile strength	488
Elongation	36
Electrical Conductivity	n.a.
Operating temp. of brazed joint	-80°C +200°C

Applications

This alloy offers improved wettability and has excellent mechanical properties at an optimized cost. Suitable for ferrous and non-ferrous base materials. It can be used for brazing hard metal tools. The temperature resistance of the weld joints depends on the geometry of the gap and the base metals to be welded. In refrigeration it is recommended for brazing galvanized iron pipes with brass or copper, due to the presence of Ni in its composition.

Suggested Flux

F16 - F25

Base Metals

Steel in general, copper and its alloys, nickel and its alloys

Heat Sources

Flame / Induction / Resistance

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	-	X	-	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TRIMETALLICS

TERNALLOY TR Trimetallic alloys are composed of two layers of brazing alloy superimposed on a central copper foil. Generally, the ratio between the brazing alloy and the copper layer is 1: 2: 1, but they can also be produced with different ratios (1.4: 1 or 1: 6: 1) when the application requires it.
They are used in situations where the brazing clearance is very large or when it is necessary to compensate for the internal stresses of the brazed joint during the cooling of the joint, due to the different coefficient of thermal expansion of the base metals.
Their main field of application is the production of hard metal tools for wood and plastic processing. The choice of the most suitable type must obviously be made according to the characteristics of the brazing alloy portion, which always determines the brazing parameters.



TERNALLOY 49TR

Brazing alloys, Cadmium Free

EN ISO 17672:2016	-
AWS A5.8-92	-
ISO 3677:1997	B-Ag49CuZnMnNi-670/680
DIN 8513	
(EN 1044:1999)	

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
49	27	21	-	-	2,5	0,5

Technical Data

Melting Point	c.a. 670 - 690 °C
Working Temperature	c.a. 690 °C
Density	c.a. 9,0 gr/cm3
	250 - 300 Mpa
Elongation	-
Electrical Conductivity	- m/mm²



Applications

TERNALLOY 49 TR is a low melting silver brazing alloy with excellent flow characteristics and high mechanical resistance. It is mainly employed for brazing of cemented carbides and materials difficult to wet such as tungsten, chromium, tantalum and titanium.
Typical applications are in tool industry. It can be used in brazing procedures by flame or induction. The suitable fluxes are F9 paste (suggested during a brazing process by induction) and F4 paste (suggested for all the other applications).
In the form of trimetallic it is supplied both with the ratio 1: 2: 1 and in the more performing 1: 6: 1.

Suggested Flux

F4, F9

Base Metals

Steels, plain and alloyed. Also tungsten, molybdenum, tantalum and chromium; cemented

Heat Sources

Flame, induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Trifoil
☐	☐	☐	☐	☐	☒	☒

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.



COPPER-PHOSPHORUS ALLOYS

The copper phosphorus and copper phosphorus silver alloys are very widespread in the field of brazing copper and its alloys. They can also be employed without the use of flux thanks to the presence of phosphorus, with the exception of copper / brass and copper / bronze welds.
The addition of silver guarantees greater ductility of the alloy, allows a reduction in the melting point, increasing the electrical conductivity characteristics of the same.
The use of these brazing alloys is not recommended in the presence of steels and alloys with a high nickel content. Otherwise, the welding of the joint will be very fragile.
SALDFLUX produces two different types of copper-phosphorous alloys. FOS® and SILVERFOS® alloys are of general use, with excellent flowability, while DULLFOS® alloys are particularly recommended in the refrigeration sector, or when the brazing gap is larger.



FOS 677

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 386
AWS A5.8-92	n.a.
ISO 3677:1997	B-Cu86SnP-650/700
DIN 8513	*n.a.*
(EN 1044:1999)	*CP 302*

Nominal Composition [%]

Ag	Cu	P	Sn			
-	86	7	7			

Technical Data

Melting Point	c.a. 650 - 700 °C
Working Temperature	c.a. 650 °C
Density	c.a. 8,0 gr/cm3
Tensile strength	250 Mpa (su Rame)
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

FOS 677 is a CuP alloy with adding of tin that gives it a very good flowing and excellent capillarity. It has a relatively low working temperature, but not self-fluxing in air; it demands flux (suggested with Flux FCu). Ideal for furnace brazing! The joints made with Fos 677 on copper and brass (kettle elements, electrical resistance immersion heaters) have good ductility. It is commonly used in heat exchangers production, fittings and HVAC. Not for application in media containing sulphur. Not for Fe and Ni alloys

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Furnace in protected atmosphere

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	X	-	-	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

FOS 60

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 179
AWS A5.8-92	n.a.
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*CP 203*

Nominal Composition [%]

Ag	Cu	P	Sn			
-	94	6	-			

Technical Data

Melting Point	c.a. 710 - 890 °C
Working Temperature	c.a. 760 °C
Density	c.a. 8,1 gr/cm3
Tensile strength	250 Mpa (su Rame)
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

FOS 60 is a CuP filler metal similar to FOS 70, but with lower fluidity and higher melting point. FOS 60 has good capillarity and filling properties. It has a wide use in manufacturing of big heat exchanger and air conditioner. It could support a re-brazing process without losing its characteristics. Do not use in a rich of sulphur environment and for brazing Ni and Fe alloys. When used for brazing copper to brass, it is suggested the use of a specific flux (Flux FCu) for reducing the formation of intermetallic compounds. Not for application in media containing sulphur.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Flame, induction heating and in a furnace under protective atmosphere.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
[-]	[-]	[X]	[-]	[-]	[X]	[X]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

FOS 70

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 180
AWS A5.8-92	BCuP-2
ISO 3677:1997	
DIN 8513	*L-CuP7*
(EN 1044:1999)	*CP 202*

Nominal Composition [%]

Ag	Cu	P	Sn			
-	93	7	-			

Technical Data

Melting Point	c.a. 710 - 820 °C
Working Temperature	c.a. 730 °C
Density	8,1 gr/cm3
Tensile strength	250
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

FOS 70 is a phosphorous content brazing alloy, very popular, extremely fluid, used for joining copper and copper alloys, brass and bronze. Due to its P content, it is considered self-fluxing, that is no additional flux is required when joining copper to copper. On the contrary, when used with a copper alloy or brass or bronze, a brazing flux is suggested to promote wetting and fluidity on the joints. Typical applications are in refrigeration and air conditioning industry and heat exchanger manufacturers. Not for application in media containing sulphur. Not for Fe and Ni alloys.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Manual and induction brazing.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
[-]	[-]	[X]	[X]	[-]	[X]	[X]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

FOS 80

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 182
AWS A5.8-92	n.a.
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*CP 201*

Nominal Composition [%]

Ag	Cu	P	Sn			
-	92	8	-			

Technical Data

Melting Point	c.a. 710 - 770 °C
Working Temperature	c.a. 720 °C
Density	8,1 gr/cm3
Tensile strength	250 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

Copper-phosphorus alloy similar to FOS 70, but with a lower melting point; it has good filling and capillarity characteristics. For work in position and assembly in general. Obtained with a special production process, the deposit can be taken up again without boiling problems. Strong brazing of copper, bronze, brass. In copper-copper joins no flux is required, to be used instead in mixed brazing with brass or bronze (recommended flux FCu). Do not use in atmospheres containing sulphur and with Fe and Ni alloys. For heating, air conditioning, refrigeration, heat exchangers, mechanical equipment, electric motors, winding of transformers. Production and repair of household appliances. For plumbing systems, for copper pipes for hot and cold water, construction and installation of copper gutters.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Furnace in protected atmosphere

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
[-]	[-]	[X]	[X]	[-]	[X]	[X]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVERFOS 2

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 279
AWS A5.8-92	n.a.
ISO 3677:1997	n.a.
DIN 8513	*(L-Ag2P)*
(EN 1044:1999)	*CP 105*

Nominal Composition [%]

Ag	Cu	P	Sn			
2	91,3	6,7	-			

Technical Data

Melting Point	c.a. 645 - 825 °C
Working Temperature	c.a. 740° C
Density	8,1 gr/cm3
Tensile strength	250 Mpa
Elongation	5%
Electrical Conductivity	5 m/Ωmm²

Applications

The Silverfos 2 is a phosphorous containing brazing alloy used for joining copper and copper alloys. Due to its P content, it is considered self-fluxing: it means that no additional flux is required when joining copper to copper. On the contrary, it is Not to be used in environments containing sulfur and with iron and nickel alloys. Typical applications are in refrigeration and air conditioning industry (it is used for service temperatures down to -50°C); in electric industry and in the plumbing trade.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

induction heating, with flame and in a furnace.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	X	X	-	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVERFOS 280

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 280
AWS A5.8-92	BCuP-6
ISO 3677:1997	B-Cu91PAg-643/788
DIN 8513	-
(EN 1044:1999)	-

Nominal Composition [%]

Ag	Cu	P	Sn			
2	91	7	-			

Technical Data

Melting Point	643-788° C
Working Temperature	740° C
Density	8,1
Tensile strength	n.d.
Elongation	n.d.
Electrical Conductivity	5,5 m/Ωmm²

Applications

Silverfos 280 is a silver-copper-phosphorus brazing alloy with excellent flow characteristics. It can be used to join copper with copper-based alloys (e.g., bronzes / brass). The phosphorus contained in the alloy acts as a flux agent, so it is not necessary to use an additional flux when brazing copper to copper; however, when joining copper-based materials (e.g., bronzes / brasses) a suitable flux must be used. Silverfos 280 should not be used on ferrous or nickel alloys, or alloys containing more than 10% nickel, due to the formation of brittle intermetallic compounds which will cause the joint to fail. Corrosion resistance is generally satisfactory, except when the joint is in contact with sulphureous atmospheres (especially at high temperatures); the alloy must therefore not be used to join parts that could come into contact with fluids containing sulfur. Typical applications are in hydraulics, in the electrical and electromechanical industry, in refrigeration and air conditioning.

Base Metals

Copper - Copper without flux. With flux also brasses and bronzes.

Heat sources

Flame / Oven / Induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	X	X	-	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVERFOS 5

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 281
AWS A5.8-92	BCuP-3
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	P	Sn			
5	89	6	-			

Technical Data

Melting Point	c.a. 645 - 815 °C
Working Temperature	c.a. 710 °C
Density	c.a. 8,2 gr/cm3
Tensile strength	250 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

That is a phosphorous alloy used for joining copper and copper-based materials with excellent flow characteristics. Due to its P content, no additional flux is required when joining copper to copper. On the contrary, it is not used for joining steels or materials containing iron. Typical applications are in refrigeration, air conditioning and electric industry. Not for application in media containing Sulphur. In refrigeration and aircon industry, Silverfos 5 is very good also for service temperature down to -40°.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass. Not for Fe and Ni

Heat sources

Induction heating, with flame and in a furnace under protective atmosphere.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	X	X	-	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVERFOS 6

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 283
AWS A5.8-92	BCuP-4
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	P	Sn			
6	87	7	-			

Technical Data

Melting Point	c.a. 643 - 813 °C
Working Temperature	c.a. 720 °C
Density	8,1 gr/cm3
Tensile strength	250 Mpa
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

That is a phosphorous alloy used for joining copper and copper-based materials with excellent flow characteristics. Due to its P content, no additional flux is required when joining copper to copper. On the contrary, it is not used for joining steels or materials containing iron. Typical applications are in refrigeration, air conditioning and electric industry. Silverfos 6 has similar characteristics to Silverfos 5 but has greater ductility because of higher Ag contain. It is preferred when a special application requests finely wrought forms. Not for application in media containing sulphur. Not for Fe and Ni alloys.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Induction heating, flame, furnace under protective atmosphere.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	X	X	-	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVERFOS 15

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 284
AWS A5.8-92	BCuP-5
ISO 3677:1997	
DIN 8513	*L-Ag15P*
(EN 1044:1999)	*CP 102*

Nominal Composition [%]

Ag	Cu	P	Sn			
15	80	5	-			

Technical Data

Melting Point	c.a. 650-800°C
Working Temperature	c.a. 700°C
Density	8,4 gr/cm3
Tensile strength	250 Mpa
Elongation	22%
Electrical Conductivity	7,0 m/Ωmm²

Applications

SILVERFOS 15 is a high fluidity copper-phosphorus alloy with high silver content and high ductility, even at low temperatures. Suitable for gap brazing of copper and copper alloys. Typical applications are in refrigeration, air conditioning and electric industry. Recommended for joints with strong thermal load and vibrations. Do not use in sulphureous environment and on Fe- and Ni-alloys. Joint-brazing at working temperatures between -70 ºC and +150 ºC.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Induction heating, with flame, in a furnace under protective atmosphere.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
X	-	X	X	X	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

SILVERFOS 18

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 285
AWS A5.8-92	BCuP-8
ISO 3677:1997	
DIN 8513	-
(EN 1044:1999)	-

Nominal Composition [%]

Ag	Cu	P	Sn			
18	75	7	-			

Technical Data

Melting Point	c.a. 645-670 °C
Working Temperature	c.a. 655°C
Density	8,6 gr/cm3
Tensile strength	250 Mpa
Elongation	c.a. 8%
Electrical Conductivity	n.a.

Applications

SILVERFOS 18 is a phosphorous alloy used for joining copper and copper based materials with excellent flow characteristics.
Not for application in media containing sulphur. Not for Fe and Ni alloys

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Flame, induction or furnace in a protected environment

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	X	X	-	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

DULLFOS® 70

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 180
AWS A5.8-92	n.a.
ISO 3677:1997	-
DIN 8513	*L-CuP7*
(EN 1044:1999)	*CP 202*

Nominal Composition [%]

Ag	Cu	P	Sn			
-	93	7	-			

Technical Data

Melting Point	c.a. 710 - 820 °C
Working Temperature	c.a. 730 °C
Density	8,1 gr/cm3
Tensile strength	250
Elongation	n.a.
Electrical Conductivity	n.a.

Applications

DULLFOS 70 is a filler metal developed for the heat exchanger and refrigeration manufacturers. It ensures a perfect joint without any leaks and porosity when the clearance of the joints is more than 0,35 mm. It's a phosphorous content brazing alloy used for joining copper and copper alloys, brass and bronze. Due to its P content, it is considered self-fluxing, that is no additional flux is required when joining copper to copper. On the contrary, when used with a copper alloy or brass or bronze, a brazing flux is suggested to promote wetting and fluidity on the joints.
DULLFOS 70 guarantees a safe and efficient brazing, without sparkles and splashes. This alloy does not bubble when overheated and it flows smoothly, wetting completely the surfaces. The joint will result clean, free of porosity and with enhanced mechanical properties.
Not for application in media containing sulphur, not for Fe and Ni alloys.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Manual and induction brazing.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	X	X	-	X	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

DULLFOS® 2

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 279
AWS A5.8-92	n.a.
ISO 3677:1997	n.a.
DIN 8513	*(L-Ag2P)*
(EN 1044:1999)	*CP 105*

Nominal Composition [%]

Ag	Cu	P	Sn			
2	62	6	-			

Technical Data

Melting Point	c.a. 645 - 825 °C
Working Temperature	c.a. 740° C
Density	8,1 gr/cm3
Tensile strength	250 Mpa
Elongation	5%
Electrical Conductivity	5 m/Ωmm²

Applications

DULLFOS® 2 alloy is a phosphorus copper with silver alloy, which has good filling and capillarity characteristics. It is widely used in the production of heating, air conditioning, refrigeration, heat exchangers, mechanical equipment, electric motors, winding of transformers. Production and repair of household appliances. For plumbing systems, for copper pipes for hot and cold water, construction and installation of copper gutters. In copper-copper joints it can be used without the use of flux, the use of which is also required in the brazing of copper-brass / bronze joints. Do not use in environments containing sulfur and with iron and nickel alloys. DULLFOS® 2 is obtained with a special production process compared to SILVERFOS 2; this allows for greater smoothness, better cleaning of the joint and the possibility of resuming the brazing bead just made, without boiling problems.

Base Metals

copper to copper without flux, with flux also brass, bronze, red brass.

Heat sources

Manual and induction heating

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	-	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

DULLFOS® 5

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 281
AWS A5.8-92	BCuP-3
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*n.a.*

Nominal Composition [%]

Ag	Cu	P	Sn			
5	89	6	-			

Technical Data

Melting Point	c.a. 645 - 815 °C
Working Temperature	c.a. 710 °C
Density	c.a. 8,2 gr/cm3
Tensile strength	250 Mpa with Cu
Elongation	c.a. 2%
Electrical Conductivity	n.a.

Applications

DULLFOS® 5 is a phosphorous containing brazing alloy, very popular, extremely fluid, used for joining copper and copper alloys, brass and bronze. Due to its P content, it is considered self-fluxing, that is no additional flux is required when joining copper to copper. On the contrary, when used with a copper alloy or brass or bronze, a brazing flux is suggested to promote wetting and fluidity on the joints. Typical applications are in refrigeration and air conditioning industry and heat exchanger manufacturers. Do not use when the brazed joint is exposed to Sulphur in their working environment. DULLFOS® 5, thanks to a special production process, guarantees a safe and efficient brazing, free from annoying sparkles and splashes. Even when overheated, the alloy does not bubble, flows smoothly and wets completely the surfaces to be brazed. The result is a joint free from porosity, safer and cleaner, and with enhanced mechanical and pressure tightness properties. It gives the possibility of second step brazing without any event of bubbling.

Base Metals

Copper to copper without flux, with flux also brass, bronze, red brass

Heat sources

Manual and induction heating

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	-	-	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

DULLFOS 15

Phoscopper Brazing alloys, Cadmium Free

EN ISO 17672:2016	CuP 284
AWS A5.8-92	BCuP-5
ISO 3677:1997	
DIN 8513	*L-Ag15P*
(EN 1044:1999)	*CP 102*

Nominal Composition [%]

Ag	Cu	P	Sn			
15	85	5	-			

Technical Data

Melting Point	c.a. 650-800°C
Working Temperature	c.a. 700°C
Density	8,4 gr/cm3
Tensile strength	250 Mpa
Elongation	22%
Electrical Conductivity	7,0 m/Ωmm²

Applications

DULLFOS® 15 is an alloy with high fluidity and penetration, even at low temperatures. Mainly used in copper-copper soldering. Its use with iron or nickel alloys is not recommended. It is widely used in the refrigeration sector, especially when the joint is subjected to strong mechanical or thermal stress. Much appreciated also in electromechanical constructions for its great conductivity. Do not use in sulphur saturated environments. Joint operating temperature between -70° and +150°C.

Base Metals

Copper alloys, without the use of deoxidizer. Brass and Bronzes.

Heat sources

Flame, induction, oven, furnace

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Extruded bars	Rings
-	-	-	-	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

BRASS ALLOYS

The choice of the filler material to be used is made according to the melting temperature of the base metal, as this type of alloy is characterized by a high melting / working temperature. The addition of silver, manganese, tin and silicon gives the alloy greater smoothness, reducing, albeit slightly, the melting temperature.
They are to be used only with a high temperature flux and can also be supplied with a flux coating.
Brass containing nickel is highly appreciated for the mechanical characteristics they guarantee to the joint, and are widely used in the production of large tools.



WELD 1

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Cu 470a
AWS A5.8-92	JIS: BCu-5
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*CU 301*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	60	39,7	-	0,3	-	-

Technical Data

Melting Point	c.a. 875 - 895 °C
Working Temperature	c.a. 900 °C
Density	c.a. 8,1 gr/cm3
Tensile strength	400 Mpa
Elongation	15%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	n.a.

Applications

This alloy is suggested for brazing operation with copper, steel, nickel and its alloys, when it is not important the resistance to the corrosion. Use with flux if not supplied with flux-coating (FLUXWELD 1).

Suggested Flux

TETRAFLUX BW or TETRAFLUX BW1

Base Metals

Steels. Also tungsten, molybdenum, tantalum and chromium; cemented carbides.

Heat Sources

Brazing with flame, induction or furnace

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

WELD 2

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Cu 670
AWS A5.8-92	n.a.
ISO 3677:1997	-
DIN 8513	*L-CuZn39Sn*
(EN 1044:1999)	*CU 303*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	59,5	39,95	0,2	0,2	0,15	-

Technical Data

Melting Point	c.a. 870 - 900 °C
Working Temperature	c.a. 880 °C
Density	8,4 gr/cm3
Tensile strength	400 Mpa
Elongation	15%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	n.a.

Applications

This alloy is suggested for brazing operations with copper, steel, nickel and its alloys, when it is not important the resistance to corrosion.

Suggested Flux

Tetraflux BW/ BWL-ATOX liquid flux

Base Metals

Steels. Also tungsten, molybdenum, tantalum and chromium; cemented carbides

Heat Sources

Brazing with flame, induction or furnace.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	-	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

WELD 110

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Cu 773
AWS A5.8-92	RBCuZn-D
ISO 3677:1997	-
DIN 8513	*n.a.*
(EN 1044:1999)	*CU 305*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	48	41,8	-	0,2	-	10

Technical Data

Melting Point	c.a. 890 - 920 °C
Working Temperature	c.a. 910 °C
Density	8,7 gr/cm3
Tensile strength	150 - 300 Mpa
Elongation	15-20%
Electrical Conductivity	n.a.
Operating temp. of brazed joint	n.a.

Applications

This is a brazing alloy with good flow characteristics. It can be used for brazing any steels, copper nickel and nickel-based alloys. Used for reconstruction of teeth gears, supports, shafts, drills, steering joint, valves seats, handle-bars and looms of bicycles, metallic furniture, pipelines etc. etc. when high mechanical characteristics are requested. Typical applications are found e.g., in automotive and in the electric and tool industry.

Suggested Flux

Tetraflux BW

Base Metals

Steels. Also tungsten, molybdenum, tantalum and chromium; cemented carbides.

Heat Sources

It can be used for brazing with flame or induction brazing procedures.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	X	X	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

CU 100

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Cu 110
AWS A5.8-92	BCu-1b
ISO 3677:1997	
DIN 8513	*n.a.*
(EN 1044:1999)	*CU 101*

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	99,98	-	-	-	-	0,02 -

Technical Data

Melting Point	1085 °C
Working Temperature	1100 °C
Density	8,94
Tensile strength	350
Elongation	n.a.
Electrical Conductivity	n.a.
Operating temp. of brazed joint	

Applications

Alloy for controlled atmosphere brazing of steels in the radiant elements sector and the productio of tubes for special applications.

Suggested Flux

N.d.

Base Metals

steels in general

Heat Sources

Oven with atmosphere control

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
[-]	[-]	[X]	[X]	[-]	[X]	[-]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies.

ALUMINIUM ALLOYS

In the field of brazing aluminium alloys, the choice of filler metals is not as wide as for brazing other non- ferrous metals. The ALUSALD 12 alloy is the most widespread even if it requires a very high brazing technique. The addition of Silicon serves to reduce the melting temperature of the filler metal which would otherwise be equal to that of the base metal, effectively making brazing impossible. These types of alloys can also be used in TIG welding.

They are alloys that can be used for brazing pure aluminium and its alloys, which however cannot contain more than 1% of Magnesium, 1.5% of Manganese and 1.25% of Silicon.

Due to the difficulties associated with aluminium brazing, ALUSALD 2 and ALUSALD 22 alloys are increasingly used, composed of aluminium and zinc in different percentages. They are alloys which, having a lower melting point than the operating temperature of the base metal, reduce process risks, especially in the field of maintenance and aluminium-copper brazing.



TECHNICAL DATA SHEET

ALUSALD12

Brazing alloys, Cadmium Free

EN ISO 17672:2016	Al 112
AWS A5.8-92	BAlSi-4
ISO 3677:1997	
DIN 8513	*SG-AlSi12*
(EN 1044:1999)	*AL 104*

Nominal Composition [%]

Al	Cu	Zn	Sn	Si	Mn	Ni
88,00	-	-	-	12	-	-

Technical Data

Melting Point	573-585°C
Working Temperature	580° C
Density	2,65 gr/cm3
Tensile strength	125-150 N/mm2
Elongation	15-30%
Electrical Conductivity	n.a.

Applications

ALUSALD 12 is a general-purpose filler metal for joining aluminium base metals, with Silicon contain over 7%. It has a good tensile strength, corrosion resistance and lower joining temperature. Sometimes it can be also used for TIG brazing with aluminium base metal with low Mg contain. Typical application: heat exchanger, air conditioning, automotive refrigeration system

Suggested Flux

Fluxal A12

Base Metals

Aluminium and its alloys

Heat Sources

By flame, induction or furnace

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	-	X	-	0	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TECHNICAL DATA SHEET

ALUSALD 2 Fluxcored

Brazing alloys, Cadmium Free

EN ISO 17672:2016
AWS A5.8-92
ISO 3677:1997 S-Zn98Al2
DIN 8513
(EN 1044:1999)

Nominal Composition [%]

Al	Cu	Zn	Sn	Si	Mn	Ni
2	-	98	-		-	-

Technical Data

Melting Point	c.a.382 - 407 °C
Working Temperature	c.a. 430 °C
Density	6,91 gr/cm3
Tensile strength	n.a.
Elongation	75%
Electrical Conductivity	n.a.

Applications

ALUSALD® 2 has a very low melting range, making it very easy to use. But the high Zinc contain makes it less compatible with aluminum base metals. It remains liquid for several seconds after heat-source is removed. This is manufactured fluxcored and flux residues are non-corrosive. Since ALUSALD® 2 already contains flux, there is no need for additional flux.

Suggested Flux

Base Metals

aluminium, copper, brass, steel

Heat Sources

Flame or induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	-	-	-	0	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.

TECHNICAL DATA SHEET

ALUSALD 22 Fluxcored

Brazing alloys, Cadmium Free

EN ISO 17672:2016
AWS A5.8-92
ISO 3677:1997 S-Zn78Al22
DIN 8513
(EN 1044:1999)

Nominal Composition [%]

Al	Cu	Zn	Sn	Si	Mn	Ni
22	-	78	-		-	-

Technical Data

Melting Point	c.a. 420-469°C
Working Temperature	c.a. 490°C
Density	5,8 gr/cm3
Tensile strength	n.a.
Elongation	75%
Electrical Conductivity	n.a.

Applications

Heat exchangers, air conditioners, condenser aluminum alloys, aluminum connecting pipes, aluminum radiator repairs, electrical cabling, dissimilar joints, etc... Zinc / Aluminum fluxcored allo (flux residues are non-corrosive) used with flame or induction for industrial aluminum and a large part of its alloys, stainless steels, copper, homogeneous or heterogeneous.
Since ALUSALD® 22 already contains flux, there is no need for additional flux.

Suggested Flux

Base Metals

Aluminium, Copper, Brass and steel

Heat Sources

Flame or induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
X	-	-	X	-	X	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.



SOFT SOLDERS

The alloys for soft brazing are preferred to silver alloys, when the working temperature cannot exceed 350°C. These alloys are therefore chosen mainly according to their melting properties. TINSALD alloys are widely used in electronics (assembly or circuits) and for other structural applications, such as the assembly of non- drinking water pipes, industrial fluids, compressed gases and vacuum assembly.
TINALLOY 35 and TINALLOY 50 are widely used in the thermo-hydraulic sector and in the food industry. All these soft alloys must be used with a specific flux (Flux T27 and Flux T75) that removes the superficial oxidation layers that are created during the early stages of the soldering process, allowing the molten alloy to react to the substrate and expand evenly.



TINSALD 100

Soft Solder alloys, Cadmium & lead Free

ISO 9453:2014 n.a.
AWS A5.8-92 n.a.
ISO 3677:1997 S-Sn100

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	-	-	99,99	-	-	-

Technical Data

Melting Point 232°C
Working Temperature n.a.
Density 7,3
Tensile strength 35N/cm2
Elongation n.a.
Electrical Conductivity n.a.

Applications

Lead-free universal soldering used in electronics, for tin coating and for model casting.

Suggested Flux

TINFLUX

Base Metals

n.a.

Heat Sources

n.a.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
[X]	[-]	[-]	[-]	[-]	[-]	[-]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TINALLOY 35

Soft Solder alloys, Cadmium a& lead Free

ISO 9453:2014 703
AWS A5.8-92 n.a.
ISO 3677:1997 S-Sn96,5Ag3,5

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
3,5	-	-	96,5	-	-	-

Technical Data

Melting Point 221 °C
Working Temperature c.a. 221 °C
Density 7,3 gr/cm3
Tensile strength S235: 25 MPa; with Cu
Elongation n.a.
Electrical Conductivity 7,5 m/Ωmm²

Applications

Tinalloy 35 is a soft solder free of Antimony and Lead with excellent flow characteristics. Typical applications are found e.g., in the electric industry, food industry and sanitary industry.

Suggested Flux

Tinflux

Base Metals

Any steel, copper and copper alloys, nickel and nickel alloys

Heat Sources

Flame, induction heating, resistance heating and soldering iron.

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
[-]	[-]	[X]	[X]	[-]	[-]	[X]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TINALLOY 50

Soft Solder alloys, Cadmium a& lead Free

ISO 9453:2014 704
AWS A5.8-92 n.a.
ISO 3677:1997 S-Sn95Ag5

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
5	-	-	95	-	-	-

Technical Data

Melting Point 220-240°C
Working Temperature n.a.
Density 7,5
Tensile strength n.a.
Elongation n.a.
Electrical Conductivity 7,5 m/Ωmm²

Applications

Tin-based brazing alloy without lead and antimony with good characteristics of fluidity, capillarity and mechanical resistance. Suitable for plumbing copper pipes with fittings for drinking water lines. The most widespread applications are in the electrical and plumbing-installers industry

Suggested Flux

TINFLUX

Base Metals

Copper, copper alloys, steel, nickel and nickel alloys

Heat Sources

Flame / Induction / Resistance

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
[-]	[-]	[X]	[X]	[-]	[-]	[-]

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TINSALD 9307

Soft Solder alloys, Cadmium a& lead Free

ISO 9453:2014
AWS A5.8-92 n.a.
ISO 3677:1997 S-Sn93Cu7

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	7	-	93	-	-	-

Technical Data

Melting Point 227 - 310 °C
Working Temperature 300 °C
Density c.a. 7,3
Tensile strength S235: 25 MPa
Elongation 10%
Electrical Conductivity 7,5 m/Ωmm²

Applications

TINSALD 9307 is an antimony and lead free soft solder used for brazing copper pipes for cold and hot water.

Suggested Flux
TINFLUX

Base Metals
Steel, copper and its alloys

Heat Sources
Flame, induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
-	-	-	X	-	-	-

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us. In the event of damage or loss our liability is limited to indemnification of the same admeasurements as is foreseen in our general terms of sales and delivery in reference to deficiencies in quality.

TINSALD 9703

Soft Solder alloys, Cadmium a& lead Free

EN ISO 17672:2016 402
AWS A5.8-92
ISO 3677:1997 S-Sn97Cu3

Nominal Composition [%]

Ag	Cu	Zn	Sn	Si	Mn	Ni
-	3	-	97	-	-	-

Technical Data

Melting Point c.a. 227 - 310 °C
Working Temperature c.a. 300 °C
Density c.a. 7.3 g/cm³
Tensile strength S235: 25 MPa; with Cu
Elongation 10%
Electrical Conductivity 7,5 m/? mm²

Applications

TINSALD 9703 is a soft solder free of Antimony and Lead for joining copper tubes for cold and hot water

Suggested Flux

Tinflux

Base Metals

Steel, copper and its alloys

Heat Sources

Flame, induction

Bare rods	Fluxcoated	Wire < Ø 1,0	Wire > Ø 1,0	Foil	Preforms	Paste
-	-	-	X	-	-	X

Our information about our products and equipment as well as our systems and procedures are based on comprehensive research and application technological experience. We communicate these results, but take no liability for respective single contracts that are exceeding thereof. We reserve the right to make technical changes in the process of product development in spoken and written terms to the best of our knowledge. Only as an exception do we give guarantees for appearance and workmanship or durability that has been specifically documented in an individual contract. Furthermore, our application technology services are available at your convenience for more detailed consultation such as the involvement in solving manufacturing and application technology problems. This does not however, release the user from their own responsibility for checking the input and recommendations we give for their own use prior to using that input or recommendation. This is especially applicable for foreign deliveries. This also applies to the trade mark rights of third parties, for applications and procedures that are not specifically given by us.



FLUXES

When brazing a joint, the base metal making up the joint must be wetted by the molten liquid metal (filler metal). The brazing of the joint is obtained only if both metals, liquid and solid, are free of surface oxides that prevent their contact; both existing ones and those that eventually can form during heating. The consistency of the oxide at room temperature varies depending on the nature of the metal. This requires a careful choice of the flux to be used, also according to the base material and the working temperature of the alloy. However, they are not designed for cleaning metals from oil, grease and coatings. The presence of these elements compromises the success of the brazing.
Saldflux srl produces fluxes for silver alloys with three different working ranges. Low temperature (LOWFLUX® series), medium (BRASFLUX® series) and high temperature (UTENFLUX® series). The fluxes of the TETRAFLUX® line are used only with brass alloys such as WELD®. Saldflux also produces fluxes for soft soldering (TINFLUX® series) and for aluminum alloys (FLUXAL® series). Saldflux fluxes are boric acid free and are manufactured in compliance with REACH standards.


BRASFLUX
SALDFLUX
TINFLUX
TETRAFLUX
BW
TETRAFLUX
BW/1
UTENFLUX
F9
UTENFLUX
F16
F9

LOWFLUX

TECHNICAL DATA SHEET

LOWFLUX F700

Flux for Brazing alloys

ISO 18496:2020 *FH10*
AWS 5.31:2012

Standard Composition
Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-850 °C
Density	0,9 gr/cm3
Viscosity	
Colour	White
Shelf life	6 months - from + 5 ° to 30 ° C
Flux residues	Corrosive; soluble in hot water

Applications
F700 is a very versatile flux, characterized by a long activation time; recommended with alloys with a low percentage of silver (TERNALLOY S series) or when brazing requires prolonged heating times of the base metals. Good capillarity. It can be used in flame welding processes. It can be used in paste / gel form, when mixed with water in the ratio of 4: 1.
Used in the production of metal frames for eyeglasses and in the brazing of bicycle frames.

Further Information
Stir before use. Only a homogeneously mixed product can guarantee constant results during brazing. The addition of water or other products can affect the characteristics of the product and alter its characteristics.

Packaging
0,250 Kg, 0,500 Kg, 1 Kg, 5 kg, 10 kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

Sede Legale e Uffici
Via Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
TEL. +39 02 907 81 812 | FAX. +39 02 907 84 933
CF/PIVA IT08049640967 | NUMERO REA: MI - 2000301
info@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

LOWFLUX F62

Flux for Brazing alloys

ISO 18496:2020	*FH10*
AWS 5.31:2012	FB3

Standard Composition

Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-750 °C
Density	0,8 gr/cm3
Viscosity	-
Colour	White
Shelf life	min 6 months, sealed,+5° to +30° C
Flux residues	Corrosives; water-soluble

Applications

The F62 is a flux suitable for alloys with a high content of Silver, on joints of small dimension (gaps) or when highly finishing is requested. Its chemical characteristics favour a very good fluidity of the alloy, with a very good capillarity into the joint. It perfectly sticks to rod/wire preheated. It can be used as well in brazing processing with flame. It can be used in paste form, with the addition of water (4:1).

Further Information

Stir well before use. Only homogeneously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters. Flux residues are corrosive and can be removed mechanical or by pickling.

Packaging

0,250 Kg, 0,500 Kg, 1 Kg, 5 kg, 10 kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
e Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/P.IVA IT08049640967 | NUMERO REA: MI - 2000301
lo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

LOWFLUX F35

Flux for Brazing alloys

ISO 18496:2020 *Similar to FH10*
AWS 5.31:2012

Standard Composition
Composti di Boro, Fluoridi - Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 400-750 °C
Density	0,95 gr/cm3
Viscosity	
Colour	White
Shelf life	In sealed containers min 6 months
Flux residues	Corrosives; water-soluble or removable by pickling

Applications
F35 is a flux suitable for alloys with a high content of Silver, on joints of small dimension (gaps) or when highly finishings are requested. Its chemical characteristics favour a very good fluidity of the alloy, with a very good capillarity into the joint. It perfectly sticks to rod/wire preheated. It can be used as well in brazing processing with flame. I can be used in paste form, with the addition of water (4:1)

Further Information
Stir well before use. Only homogeneously mixed paste will display constant and repeatable performance. Additions of other products may negatively after these parameters.

Packaging
0,250 Kg, 0,500 Kg, 1 Kg, 5 Kg, 10 Kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

BRASFLUX

TECHNICAL DATA SHEET

BRASFLUX®

Flux for Brazing alloys

ISO 18496:2020	*FH10*
AWS 5.31:2012	FB3-A

Standard Composition

Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-800 °C
Density	0,8 gr/cm3
Viscosity	n.d.
Colour	White
Shelf life	min 6 months, sealed, +5° to +30° C
Flux residues	Corrosives; water-soluble

Applications

BRASFLUX® in a general purpose flux for brazing. It is suggested for steels, non-ferrous metals (except for Alluminium and Alluminium alloys). It guarantees a very good wetting and flowing during the brazing. It can be used with different type of heating (flame, induction). It is supplied in powder and paste, with addiction of water (4:1).

Further Information

Stir well before use. Only homogeniously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters.

Packaging

100gr, 250gr, 500gr, 1kg, 5kg, 10kg, 20kg (PS); 25kg(PV)

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

Sede Legale e Uffici
Via Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
TEL. +39 02 907 81 812 | FAX. +39 02 907 84 933
CF/P.IVA IT08049640967 | NUMERO REA: MI - 2000301
info@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

BRASFLUX F16

Flux for Brazing alloys

ISO 18496:2020	*FH10*
AWS 5.31:2012	FB3-C

Standard Composition

Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-800 °C
Density	0,9 gr/cm3
Viscosity	n.d.
Colour	White
Shelf life	min 6 months sealed;+5° to +30° C
Flux residues	Corrosives; water-soluble

Applications

F16 is a general purpose flux with a good activity power. Suitable for low Silver alloys (TERNALLOY S series) or when a prolonged heating of base metals is required. Good capillarity properties. Residues can be removed by warm water or by brush. It can be used during any brazing procedure by flame and employed in form of paste if mixed with water (proportion 4:1).

Further Information

Stir well before use. Only homogeniously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters.

Packaging

0,250 Kg, 0,500 Kg, 1 Kg, 5 kg, 10 kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
lo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

BRASFLUX F25

Flux for Brazing alloys

ISO 18496:2020	*FH10*
AWS 5.31:2012	FB3-D

Standard Composition

Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-850 °C
Density	0,8 gr/cm3
Viscosity	n.d.
Colour	White
Shelf life	min 6 months, between +5° to +30° C
Flux residues	Corrosives; water-soluble

Applications

F25 is a general-purpose flux for ferrous and non-ferrous alloys, except aluminium. F25 has a good activity power, good capillarity properties. Residues can be removed by warm water or by brush. It can be used either with flame or induction brazing. It can be employed in form of paste if mixed with water (proportion 4:1).

Further Information

Stir well before use. Only homogeneously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters. Flux residues are corrosive and can be removed mechanically or by pickling.

Packaging

0,250 Kg, 0,500 Kg, 1 Kg, 5 kg, 10 kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
lo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

FCu

Flux for Brazing alloys

EN 1045:2010	*EN 1045 FH 10*
AWS 5.31:2012	FB3-A

Standard Composition

Boron Compound, Fluorides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-800 °C
Density	0,8 gr/cm3
Viscosity	n.d.
Colour	White
Shelf life	min 6 months, sealed, +5° to +30° C
Flux residues	Corrosives; water-soluble

Applications

FCu is suggested on brass to copper joints. It is used also on Cu-Cu or Cu alloys joints when capillary penetration is required. Suitable for FOS 677

Further Information

Stir well before use. Only homogeniously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters.Flux residues are not corrosive and can be removed mechanical or by pickling.

Packaging

100gr, 250gr, 500gr, 1kg, 5kg, 10kg, 20kg (PS); 25kg(PV)

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20090 Fizzonasco di P.E. | Milano | Italy
EL. +39 02 907 81 812 | FAX. +39 02 907 84 933
F/PIVA IT08049640967 | NUMERO REA: MI - 2000301
flo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20090 Fizzonasco di P.E. | Milano | Italy
Orario 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20090 Fizzonasco di P.E. | Milano | Italy



UTENFLUX

TECHNICAL DATA SHEET

UTENFLUX F4

Flux for Brazing alloys

ISO 18496:2020	*FH 12*
AWS 5.31:2012	FB3-H

Standard Composition

Boron Compound, Fluorides.

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-850 °C
Density	1,6 gr/cm3
Viscosity	n.d.
Colour	white
Shelf life	6 months from + 5 ° to 30 ° C
Flux residues	Flux residues are corrosive and can be removed mechanically or by pickling.

Applications

F4 is suggested for brazing stainless steel and cemented carbides. This flux is suitable for all flame and induction brazing procedures. Applications in the tool industry. Only homogeneously mixed paste will display constant and repeatable performance.

Further Information

Stir well before use. Addition of water may negatively alter these parameters. Avoid rapid changes in temperature.

Packaging

100gr; 250gr; 500gr; 1kg; 5kg; 10kg; 20kg; 100kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

Sede Legale e Uffici
Via Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
TEL. +39 02 907 81 812 | FAX. +39 02 907 84 933
CF/P.IVA IT08045640967 | NUMERO REA: MI - 2000301
info@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

UTENFLUX F9

Flux for Brazing alloys

ISO 18496:2020	*FH 12*
AWS 5.31:2012	FB3-H

Standard Composition

Boron Compound, Fluorides, Boron

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 550-850 °C
Density	1,6 gr/cm3
Viscosity	n.d.
Colour	Brown
Shelf life	6 months
Flux residues	Corrosives; water-soluble

Applications

F9 is suggested for brazing stainless steel and cemented carbides. This flux is suitable for all flame and induction brazing procedures. Applications in the tool industry. Only homogeniously mixed paste will display constant and repeatable performance.

Further Information

Stir well before use. Additions of water may negatively alter these pararameters.Shelf life is min 6 months, but only in the original sealed container at storage temperatures between +5° to +30° C. Avoid rapid changes in temperature.

Packaging

250 gr, 500 gr, 1 Kg, 5 Kg, 10 Kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA 11708049640967 | NUMERO REA: MI - 2000301
lo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

UTENFLUX F20

Flux for Brazing alloys

ISO 18496:2020	*FH20*
AWS 5.31:2012	FB3-H

Standard Composition

Boron Compound, Flourides

BORIC ACID FREE FLUX

Technical Data

Working Temperature	c.a. 700-1000 °C
Density	0,8 gr/cm3
Viscosity	n.d.
Colour	White
Shelf life	6 months - from + 5 ° to 30 ° C
Flux residues	Residues are not corrosive but must be removed mechanically or by pickling.

Applications

F20 is recommended for brazing in all those situations in which the base metals, by virtue of the technology used, are subjected to rapid heating or when the dimensions of the joint or its geometry are such as to require prolonged heating at high temperature. It can be used with all metals (except aluminium). Also, for refractory steels. Recommended for induction brazing. It can be used in paste form, if mixed with water in the proportion of 4: 1.

Further Information

Stir well before use. Only homogeneously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters. Flux residues are corrosive and can be removed mechanically or by pickling.

Packaging

0,250 Kg, 0,500 Kg, 1 Kg, 5 kg, 10 kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TETRAFLUX

TECHNICAL DATA SHEET

BW 35 - Liquid Flux

ISO 18496:2020	*FH 23C*
AWS 5.31:2012	FB3-K

Standard Composition

Boron compounds - Trimethylborate

Technical Data

Working Temperature	c.a. 700-1100 °C
Density	0,852
Viscosity	n.d.
Colour	Transparent
Shelf life	6 Months
Flux residues	None

Applications

BW 35 flux is a highly concentrated (approx. 50%) liquid flux that can only be used with vaporizers; the gas entering the vaporizing devices mechanically transports the liquid which, when burned in the flame, is able to locally produce a redox atmosphere. The advantages of this category of products are the cost-effectiveness of use, the absence or very low presence of residues (which are inert anyway), ease of application (it must not be brushed or dosed) and resistance to heating. The BW 35 is mainly used in the goldsmith sector and when using micro flames.

Further Information

Flux is flammable. Read the safety data sheet before use.

Packaging

10 Lt, 25 Lt, 60 Lt, 200 Lt

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

ATOX 24 - Liquid Flux

ISO 18496:2020	*FH 23C*
AWS 5.31:2012	FB3-K

Standard Composition

Boron compounds - Trimethylborate

Technical Data

Working Temperature	c.a. 700-1100 °C
Density	0,864
Viscosity	n.d.
Colour	Transparent
Shelf life	6 Months
Flux residues	None

Applications

Flux BW 24 ATOX is a liquid flux with a high concentration (about 60%) that can only be used with vaporizers; the gas entering the vaporizers mechanically transports the liquid which, when burned in the flame, is able to locally produce a redox atmosphere. The advantages of this category of products are the cost-effectiveness of use, the absence or very low presence of residues (which are inert anyway), ease of application (it must not be spread or dosed) and resistance to heating. The BW 24 ATOX is mainly used in the metal furniture, refrigeration and air conditioning sectors.

Further Information

Flux is flammable. Read the safety data sheet before use.

Packaging

10 Lt, 25 Lt, 60 Lt, 200 Lt

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
e Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
lo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

BW 13 - Liquid Flux

ISO 18496:2020	*FH 23-C*
AWS 5.31:2012	FB3-K

Standard Composition

Boron compounds - Trimethylborate

Technical Data

Working Temperature	
Density	0,864
Viscosity	n.d.
Colour	Transparent
Shelf life	6 Months
Flux residues	None

Applications

Flux BW 13 is a liquid flux with a high concentration (about 70%) that can only be used with vaporizers; the gas entering the vaporizers mechanically transports the liquid which, when burned in the flame, is able to locally produce a redox atmosphere. The advantages of this category of products are the cost-effectiveness of use, the absence or very low presence of residues (which are inert anyway), ease of application (it must not be spread or dosed) and resistance to heating. The BW 13 is mainly used in the metal furniture, refrigeration and air conditioning sectors.

Further Information

Flux is flammable. Read the safety data sheet before use.

Packaging

10 Lt, 25 Lt, 60 Lt, 200 Lt

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

TETRAFLUX BW1

Flux for Brazing alloys

ISO 18496:2020	*FH21*
AWS 5.31:2012	FB3-J

Standard Composition

Boron Compounds

Technical Data

Working Temperature	c.a. 700-1100 °C
Density	1,2 gr/cm3
Viscosity	
Colour	White
Shelf life	6 months in original sealed jar
Flux residues	Corrosive. Removable with mechanical action or pickling

Applications

Flux BW1 is a flux for the autogenous brazing of bronzes and brass. It can be used both with copper alloys and with nickel-based alloys. Especially when coated sticks are not employed. It is a flux to use when the working temperature is higher than 800 °. Widely used in the automotive sector.

Further Information

Stir before use. Only a homogeneously mixed product can guarantee constant results during brazing. The addition of water or other products can affect the characteristics of the product. Store in closed rooms (Temp from +5°to30°C)

Packaging

250 gr, 500 gr, 1000 gr 5 Kg, 10Kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

TETRAFLUX BW

Flux for Brazing alloys

ISO 18496:2020	*FH21*
AWS 5.31:2012	FB3-J

Standard Composition

Boron Compound

Technical Data

Working Temperature	c.a. 700-1100 °C
Density	1,2 gr/cm3
Viscosity	
Colour	Bianco/White
Shelf life	min 6 months in the original container
Flux residues	Corrosives; mechanical or by pickling

Applications

FLUX BW is a high temperature brazing flux suggested for brazing brass and bronze alloys (copper and copper alloys as well as nickel and nickel alloys). Typical applications are found in the automotive or electric industry.

Further Information

Stir well before use. Only homogenously mixed paste will display constant and repeatable performance. Additions of water may negatively alter these parameters.Storage temperatures between +5° to +30° C

Packaging

250 gr, 500 gr, 1000 gr 5 Kg, 10Kg, 25 Kg, 50 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

FLUXAL

TECHNICAL DATA SHEET

FLUXAL A23

Flux for Aluminium Brazing alloys

ISO 18496:2020	*FL10*
AWS 5.31:2012	FB1-A

Standard Composition

compounds of hygroscopic chlorides and fluorides

Technical Data

Working Temperature	c.a. 550-650 °C
Density	2,7 gr/cm3
Viscosity	n.d.
Colour	white
Shelf life	If well preserved it has no expiry date.
Flux residues	Corrosive, removable with hot water or mechanically

Applications

Flux for brazing mainly used in the refrigeration / air conditioning sector for joining copper / aluminium fittings, together with the ALUSALD12 alloy.
Corrosive flux, the application of which mainly takes place by immersing the hot rod (about 450 ° C) in the powder to obtain a sort of coating thus avoiding manual distribution on the joint.

Further Information

Store in a dry and ventilated place

Packaging

250 gr, 500 gr, 1 Kg, 5 Kg, 10 Kg, 25 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

FLUXAL A12

Flux for Aluminium Brazing alloys

ISO 18496:2020	*FL10*
AWS 5.31:2012	FB1-A

Standard Composition

Potassium Fluoroaluminate

Technical Data

Working Temperature	c.a. 550-650 °C
Density	2,7 gr/cm3
Viscosity	n.d.
Colour	white
Shelf life	If well preserved it has no expiry date
Flux residues	Corrosive; removable with hot water or mechanically

Applications

Flux for brazing aluminium and its alloys. Corrosive flux, mainly used for manual flame brazing. Mixed with water, it can also be applied as a paste, but it must be mixed continuously to prevent it from solidifying. The mixing gives rise to an exothermic phenomenon. It is essential that it is applied uniformly. It is therefore ideal to use it as a spray or by immersion.

Further Information

Store in a dry and ventilated place

Packaging

250 gr, 500 gr, 1 Kg, 5 Kg, 10 Kg, 25 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
e Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
lo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

TECHNICAL DATA SHEET

FLUXAL A8

Flux for Aluminium Brazing alloys

ISO 18496:2020	*FL20*
AWS 5.31:2012	FB1-A

Standard Composition

Potassium Fluoroaluminate

Technical Data

Working Temperature	c.a. 565-572 °C
Density	2,7 gr/cm3
Viscosity	n.d.
Colour	white
Shelf life	If well preserved it has no expiry date
Flux residues	Non corrosive, removable with hot water

Applications

It is a non-corrosive flux for aluminium, used in the production of heat exchangers and in the automotive sector. Used together with the ALUSALD12 alloy, it must be sprayed or applied in an aqueous solution (5% -25%) added with a surfactant to allow better distribution. It can also be applied to the joints by immersion. It has the advantage of protecting aluminium from surface oxidation, without causing any post-brazing corrosion phenomenon.
FLUXAL A8 flux can be used for manual brazing, but it is frequently used in brazing in an inert atmosphere (Brazing furnace).

Further Information

Store in a dry and ventilated place

Packaging

250 gr, 500 gr, 1 Kg, 5 Kg, 10 Kg, 25 Kg

Details in product brochures or other advertisements about our products, equipment, plant and processes are based on our research and our experience in the f ield of applied engineering and are merely recommendations. It is not possible to infer any warranted qualities or warranted use f rom these details, unless they were expressly agreed as a warranted quality. We reserve the right to make technical modifications in the course of our product development. The user must verify the suitability of our products and processes for the use or application intended by him on his own responsibility. This shall also apply to the protection of third party property rights as well as to applications and processes. The properties of samples and specimens are binding only if these have been expressly agreed to define the quality of the goods. Information on the quality and durability and other particulars are warranted only if these are agreed and designated as such. The specifications agreed with the user/purchaser in writing are relevant for the quality of the goods and if specifications have not been agreed in writing, the information contained in our technical data s heets, specifications or drawings. Any additional or diverging agreements on the quality must be in writing. Any suitability of the product for the presupposed or customary use which supplements or diverges from the agreed quality is out of the question. Our General Conditions of Sale and Delivery shall apply.

ede Legale e Uffici
a Friuli 5 | 20072 Fizzonasco di P.E. | Milano | Italy
L. +39 02 907 81 812 | FAX. +39 02 907 84 933
/PIVA IT08049640967 | NUMERO REA: MI - 2000301
fo@saldflux.com | saldflux@legalmail.it

Sede Magazzino
Via Privata Vico Veneto 32/5 | 20072 Fizzonasco di P.E. | Milano | Italy
Orari: 8.00 - 12.00 | 13.00 - 17.00

Stabilimento
Via Martiri Della Resistenza 6 | 20072 Fizzonasco di P.E. | Milano | Italy

FLUXCOATED RODS

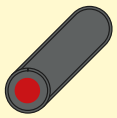
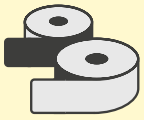
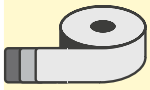
The wide range of cadmium-free brazing alloys can also be supplied coated with flux. The content of the bare alloys corresponds to the composition indicated in the table of cadmium-free alloys (Pages 1, 2). The fluxcoated alloys can have different thicknesses (outer diameter) of the external coating according to the customer's needs (greater or lesser quantity of flux). Saldflux mainly produces two types of coatings. FLUXALLOY® with "flexible" type coating, specific for on-site maintenance and repairs, and SALDFLOW® with "No-Binder" coating, particularly recommended in assembly lines in the food, air conditioning and refrigeration industries.
All types of coating are REACH Compliant and ecological (Acid Boric Free), without the emission of annoying fumes.

FLUXALLOY® & SALDFLOW®

Bare rods	Fluxcoated rods (Flexible coating)	Fluxcoated rods ("No-Binder" coating)	Melting range	Working Temp.	ISO 17672	ISO 18496
TERNALLOY 56	FLUXALLOY 56	SALDFLOW ® 56	620-655	650	Ag 156	Fh 10
TERNALLOY 55	FLUXALLOY 55	SALDFLOW ® 55	630-660	660	Ag 155	Fh 10
TERNALLOY 45	FLUXALLOY 45	SALDFLOW ® 45	640-680	670	Ag 145	Fh 10
TERNALLOY 40	FLUXALLOY 40	SALDFLOW ® 40	650-710	690	Ag 140	Fh 10
TERNALLOY 34	FLUXALLOY 34	SALDFLOW ® 34	630-730	710	Ag 134	Fh 10
TERNALLOY 30	FLUXALLOY 30	SALDFLOW ® 30	665-755	740	Ag 130	Fh 10
TERNALLOY 25	FLUXALLOY 25	SALDFLOW ® 25	680-760	760	Ag 125	Fh 10
TERNALLOY 444	FLUXALLOY 444	SALDFLOW ® 444	675-735	730	Ag 244	Fh 10
TERNALLOY 420	FLUXALLOY 420	SALDFLOW ® 420	690-810	810	Ag 220	Fh 10



Available delivery forms

	Bare rods	ø: from 0,7 mm to 4 mm	Length: 500 mm and 1000 mm. Other lenghts upon request
	Fluxcoated rods	ø: 1,5 - 2 - 2,4 - 3 mm	Standard, reduced, very reduced and extremely reduced coating. Other thickness upon request. 22 available coloured coating. Printing upon request
	Fluxcored rods and wires	ø: 2 - 5 mm	Bare rods: 500 mm lenght. Wires: in coils or spools
	Wires	ø: from 1,5 to 3 mm ø > 3 mm upon request	Coils or spools SD 300 K
	Thin wires	ø: from 0,4 to 1,4 mm ø: < 0,4 upon request	Coils or reels DIN 125 or DIN 80
	Foils and Strips	Thickness from 0,1 to 0,94	Width from 2 to 50 mm. Other dimensions upon request
	Trifoil	Thickness from 0,4 to 0,8 mm	Width from 2 to 80 mm. Other dimensions upon request
	Rings & Preforms	-	According to customer's specifications
	Fluxes	Powder	250 g - 500 g - 500 g 1 Kg - 4 kg - 10 kg - 25 kg
	Fluxes	Paste	250 g - 500 g - 500 g 1 Kg - 5 kg - 10 kg
	Fluxes	Liquid	0,5 l - 1 l - 2,5 l


SALDFLUX
BRAZING

BRAZE WITH US!

SALDFLUX™

Head quarter e Offices
Via Friuli 5
20072 Fizzonasco di P.E.
Milan | Italy
Tel +39 02.90781812

Factory
Via Martiri Della Resistenza 6
20072 Fizzonasco di P.E.
Milan | Italy

info@saldflux.com
www.saldflux.it