URSO©

CATALOG

- BRAZING ALLOYS
- SOLDERS
- WELDING ALLOYS
- FLUX/PASTE
- SILVER PRODUCTS FOR INDUSTRY NEED

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TABLE OF CONTENTS

ABOUT US

URSO d.o.o. is a specialized supplier of brazing alloys, fluxes and filler metals for Brazing, Soldering and Welding. We offer the most comprehensive and widest range of different alloys and products, from general purpose to special applications, variety of different make-ups, from standard forms to custom engineered forms. We also offer conformity to the main international, tehnical and environmental standards and complete source for tehnical information, consuling and assistance. If you have the need for products and services from our program, please do not hesitate to contact us and we will be pleased to provide you with quality offers and we will also present you with our program.

THE SCOPE OF SILVER SOLDERINGS

The following are general purpose brazing alloys, suitable to join easily a wide range of ferrous and non-ferrous base materials (iron, steel, copper, brass, etc.). At increased operating temperatures, the strength of the joints almost always decreases considerably. Short-term overruns are permitted if there is no noticeable load on the joints at an elevated temperature. If, in addition to high mechanical loads, there is an increased operating temperature, do not use hard soldering zinc containing. Continuous service operating temperatures of joints brazed with these alloys range up to approx 200°C. When joining stainless steel in wet environments, in order to avoid failure of the joint due to interfacial corrosion, it is recommended to use zinc-free alloys, or alloys with Nickel additions. Available in many different presentation forms (rods, flux-coated rods, wires, strips, rings, preforms, pastes and powders), these alloys are very free flowing, ductile and strong. All these alloys do not contain Cadmium. They are divided in two categories: alloys with Tin and alloys without Tin. Tin being used to lower the melting temperature of the alloy. When brazing in an oxidizing environment (that is: in air), the use of a proper flux is required.

The scope-basic materials for soldering	Brazing alloys	Working temperature	Fluxes
Unalloyed and low alloy steel, Unwanted metals and their alloys (other than light metals)	URSO Ag55	660°C	F-1 paste/powder
	URSO Ag45	670°C	F-1 paste/powder
	URSO Ag34	710°C	F-1 paste/powder
Workers who must ensure high strength and toughness at elevated operating temperatures (up to 200 ° C)	URSO Ag440	730°C	F-1 paste/powder
Steel with high chromium content (stainless steel and steel, resistant to whipping)	URSO Ag55	660°C	flux black paste
	URSO Ag45	670°C	flux black paste
	URSO Ag49	690°C	flux black paste
Tungsten carbide	URSO Ag49/Cu	690°C	flux black paste
	URSO Ag49	690°C	flux black paste
	URSO Ag27	840°C	flux black paste
Copper	URSO Ag2P	740°C	without flux*
	URSO Ag5P	710°C	without flux*
	URSO Ag15P	700°C	without flux*
	URSO AgCuP7	730°C	without flux*
For brazing alloys bracelets with similar non-ferrous metals	URSO Ag20	810°C	F-1 paste/powder
Platinum	URSO Ag56	650°C	flux
Titan	URSO Ag60	850-900°C	paste/powder
	URSO Ag720	850-900°C	without flux**

* for joining copper with brass or copper with red cast iron only using F-1 paste / powder
** Inductive hard soldering with argon as shielding gas or in vacuum

CADMIUM FREE BRAZING ALLOYS

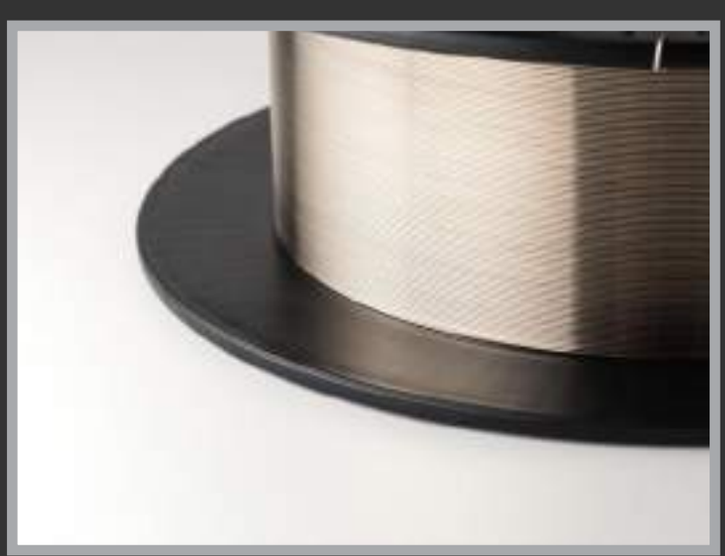
Cadmium-free brazing alloys can be used at operating temperatures from -200 ° C to + 200 ° C. All solders can be used for any type of steel, copper and copper alloys and nickel and nickel alloys. When soldering on stainless steel, zinc corrosion can occur due to the zinc content in the solders. Tin-free solders are especially useful for joints with dynamic workloads and are resistant to overheating.

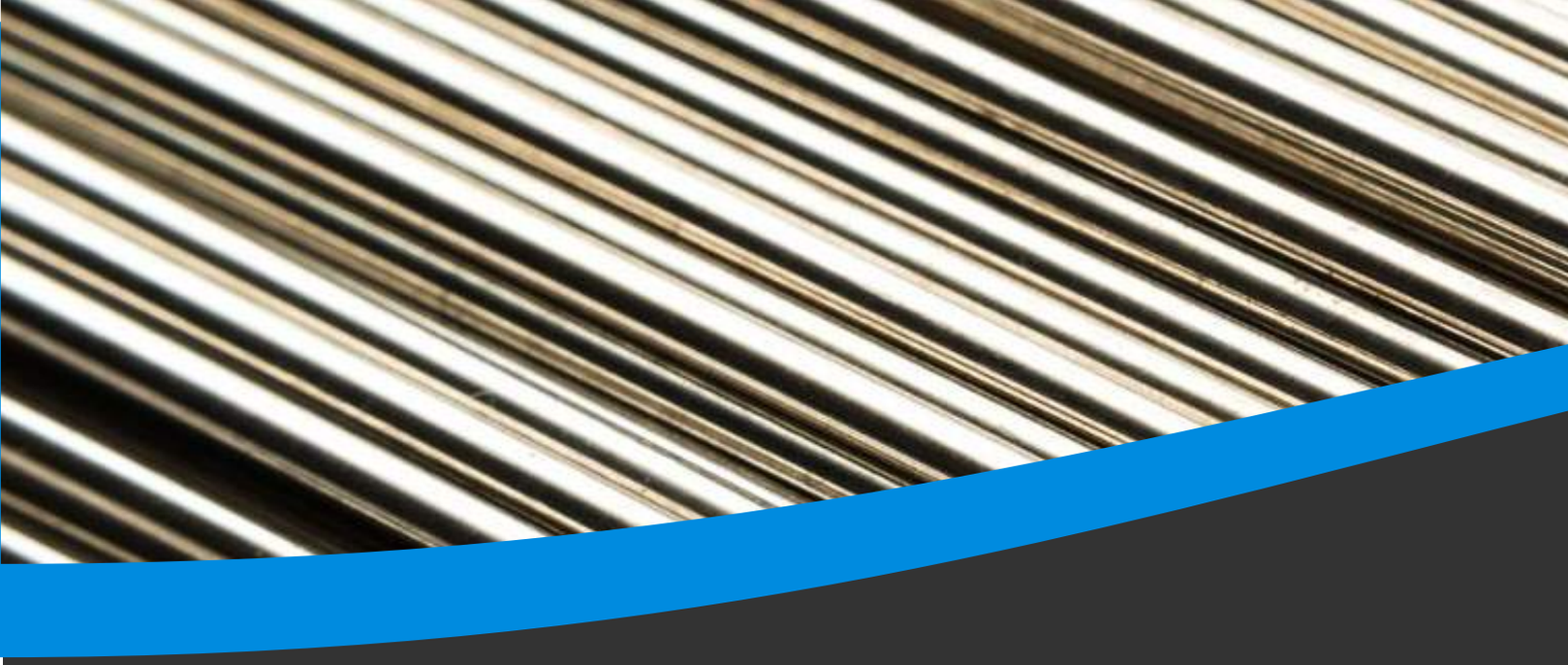
BRAZING ALLOYS WITH TIN

Code	Composition %				Melting Range	Working temperature	Density	Tensile Strength	International Specification	
	Ag	Cu	Zn	Sn	°C	°C	g/cm3	Mpa	ISO 17672	AWS 5.8
URSO Ag56	56	22	17	2	620-655	650	9,5	350	Ag 156	Bag-7
URSO Ag55	55	21	22	2	630-660	660	9,4	350	Ag 155	/
URSO Ag45	45	27	25,5	2,5	640-680	670	9,2	350	Ag 145	Bag-36
URSO Ag40	40	30	28	2	650-710	690	9,1	350	Ag 140	Bag-28
URSO Ag38	38	31	29	2	650-720	720	9,1	350	Ag 138	Bag-35
URSO Ag34	34	36	27,5	2,5	630-730	710	9	360	Ag 134	/
URSO Ag30	30	36	32	2	665-755	740	8,8	360	Ag 130	/
URSO Ag25	25	40	33	2	680-760	750	8,7	360	Ag 125	Bag-37

BRAZING ALLOYS WITHOUT TIN

Code	Composition %				Melting Range	Working temperature	Density	Tensile Strength	International Spec.	
	Ag	Cu	Zn	Si	°C	°C	g/cm3	Mpa	ISO 17672	AWS 5.8
URSO Ag450	45	30	25	/	665-745	730	9,1	/	Ag245	Bag-15
URSO Ag440	44	30	26	/	675-735	730	9,1	400	Ag244	Bag-15
URSO Ag330	33	33,5	33,5	0,15	680-750	755	8,9	/	Ag235	/
URSO Ag300	30	38	32	/	680-765	760	8,8	380	Ag230	Bag-20
URSO Ag250	25	40	35	/	700-790	780	8,8	145	Ag255	/
URSO Ag200	20	44	36	0,15	690-810	810	8,7	145	Ag220	/
URSO Ag120	12	48	40	0,15	800-830	820	8,4	155	Ag212	/
URSO Ag50	5	55	40	0,15	820-870	870	8,4	135	Ag205	/





SILVER BRAZING ALLOYS FOR SPECIAL USE

Thanks to their special composition it can be used for other applications where the usuals alloys are not recommended. The below mentioned brazing materials are appropriated for furnace brazing (URSO Ag7228), including vacuum, and for unusual and special applications: URSO Ag8515 or URSO Ag7200 is suggested when ammonia-resistant joints are requested; URSO Ag6030 when the use of zinc is not allowed.

Code	Composition %							Melting Range	Working temperature	Density	International Specification	
	Ag	Cu	Zn	Sn	Mn	Ni	In	°C	°C	g/cm3	ISO 17672	AWS 5.8
URSO Ag7228	72	28	/	/	/	/	/	780	781	10	Ag272	Bag-8
URSO Ag7200	72	/	28	/	/	/	/	710-730	710	8,4	/	/
URSO Ag6030	60	30	/	10	/	/	/	600-730	720	9,8	Ag 160	Bag-18
URSO Ag8515	85	/	/	/	15	/	/	960-970	960	9,4	Ag485	Bag-23
URSO Ag5614	56	27	/	/	/	2,5	15	600-710	700	9,2	Ag456	/
URSO Ag6026	60	26	14	/	/	/	/	695-730	720	9,5	/	/
URSO Ag6719	67	19,5	13,5	/	/	/	/	670-720	710	9,7	/	/

FLUXCOATED RODS

The wide range of cadmium free silver solders can be supplied as fluxcoated rods as well. The content of their bare brazing rod meets the composition indicated in the cadmium free brazing alloys table. Fluxcoated rods can have several external coating layers (more or less flux quantity) to meet specific customer's needs.

Bare Rods	Flexible coating	Non-flexible coating	Eco coating	Melting Range °C	Working Temperature °C	EN 17672	EN 1045
URSO Ag56	URSOFLUX Ag56	URSOFLUID Ag56	URSOFLOW Ag56	620-655	650	Ag 156	Fh 10
URSO Ag55	URSOFLUX Ag55	URSOFLUID Ag55	URSOFLOW Ag55	630-660	660	Ag 155	Fh 10
URSO Ag45	URSOFLUX Ag45	URSOFLUID Ag45	URSOFLOW Ag45	640-680	670	Ag 145	Fh 10
URSO Ag40	URSOFLUX Ag40	URSOFLUID Ag40	URSOFLOW Ag40	650-710	690	Ag 140	Fh 10
URSO Ag38	URSOFLUX Ag38	URSOFLUID Ag38	/	650-720	720	Ag 138	Fh 10
URSO Ag34	URSOFLUX Ag34	URSOFLUID Ag34	URSOFLOW Ag34	630-730	710	Ag 134	Fh 10
URSO Ag30	URSOFLUX Ag30	URSOFLUID Ag30	URSOFLOW Ag30	665-755	740	Ag 130	Fh 10
URSO Ag25	URSOFLUX Ag25	URSOFLUID Ag25	/	680-760	760	Ag 125	Fh 10
URSO Ag444	URSOFLUX Ag444	URSOFLUID Ag444	URSOFLOW Ag444	675-735	730	Ag 244	Fh 10
URSO Ag430	URSOFLUX Ag430	URSOFLUID Ag435	/	680-765	760	Ag 230	Fh 10
URSO Ag420	URSOFLUX Ag420	URSOFLUID Ag420	URSOFLOW Ag420	690-810	810	Ag 220	Fh 10

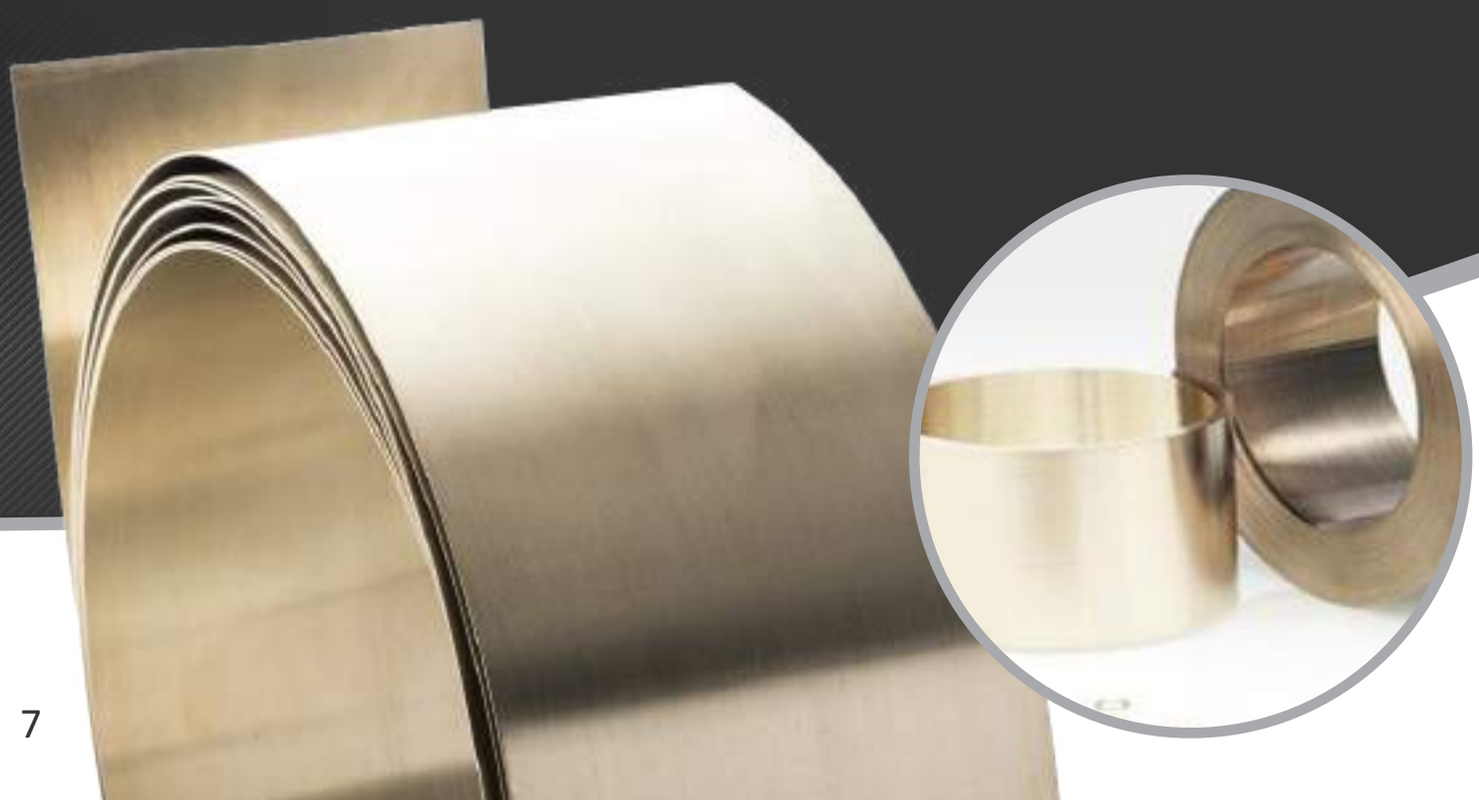
CADMIUM FREE BRAZING ALLOYS

These alloys are widely used for the brazing of tungsten carbide and poorly wetting materials, such as molybdenum, tantalum, chromium and wolfram. The strength of the solder we want to achieve depends on the base material. They are cadmium-free.

Code	Composition %					Melting Range	Working Temperature	Density	Tensile Strength	International Specification	
	Ag	Cu	Zn	Mn	Ni	°C	°C	g/cm3	Mpa	ISO 17672	AWS A5.8
URSO Ag49	49	16	23	7,5	4,5	680-705	690	8,9	250-300	Ag 449	Bag-22
URSO Ag491	49	27	21	2,5	0,5	670-690	690	8,9	250-300	/	/
URSO Ag50N	50	20	28	/	2	660-705	700	9,4	/	Ag 450	Bag-24
URSO Ag40N	40	30	28	/	2	670-780	770	9,2	150-300	Ag 440	Bag-4

When there are large inequalities between the sizes of the components composing the joint, sometimes a joint failure resulting from thermally inducted stress occurs. Perhaps the best known example of this problem is when large pieces of tungsten carbide are brazed to steel backing pieces. Braze filler composites that have a core of copper with a coating of filler metal on both surfaces (1:2:1) are frequently used to reduce the risk of cracking (sandwiched or trifoil material).

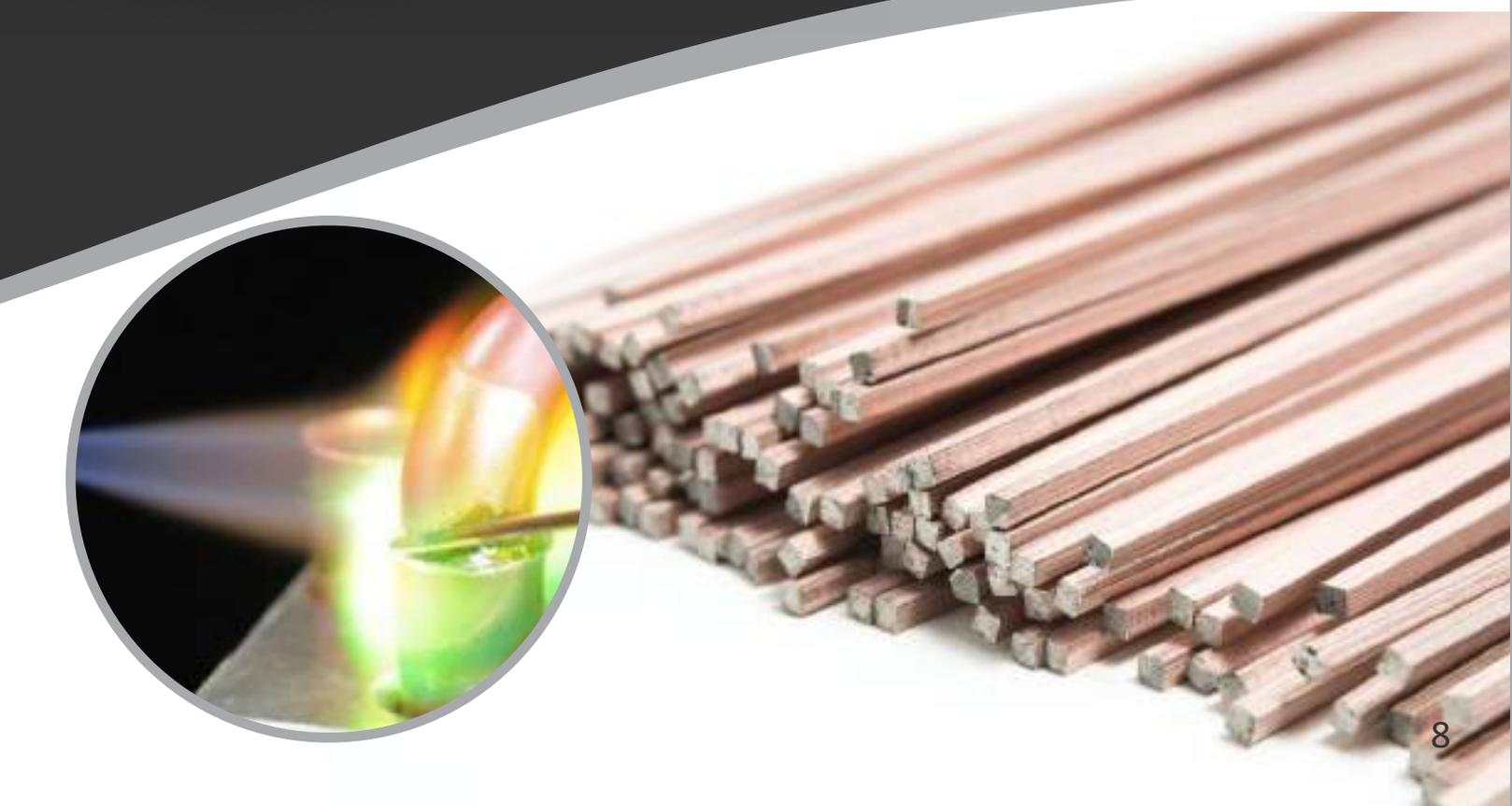
Code	Composition %						Melting Range	Working Temperature	Density	Tensile Strength	International Specification	
	Ag	Cu	Zn	Mn	Ni	Si	°C	°C	g/cm3	Mpa	ISO 17672	AWS A5.8
URSO Ag49/Cu	49	27,5	20,5	2,5	0,5	/	670-690	690	9	150-300	/	/



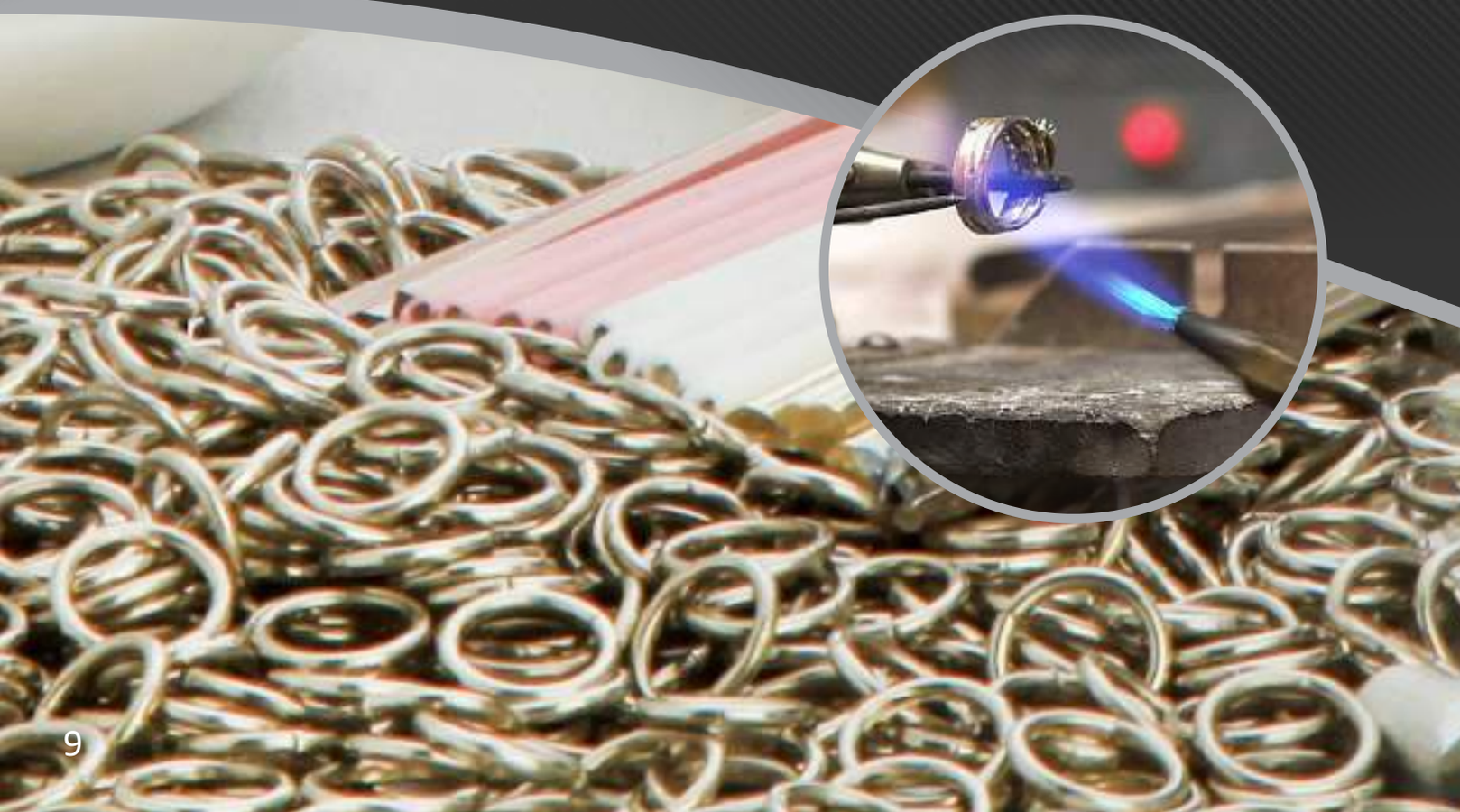
PHOSPHOR BRAZING ALLOYS FOR COPPER MATERIALS

They can be used at operating temperatures from -70 °C to +150° C. Solders are suitable for connecting copper with copper or copper alloys. When connecting copper with copper, the use of additional fusing due to the phosphorus content is not necessary. They are not suitable for steel and nickel alloys due to the formation of a fragile phase.

Code	Composition %				Melting Range	Working Temperature	Density	Tensile Strength	International Spec.	
	Ag	Cu	P	Ostalo	°C	°C	g/cm3	N/mm2	ISO 17672	AWS A5.8
URSO Cu6P	/	94	6	/	710-890	760	8,1	250	CuP 179	/
URSO Cu7P	/	93	7	/	710-820	730	8,1	250	CuP 180	BCuP-2
URSO Cu8P	/	92	8	/	710-720	720	8	250	CuP 182	/
URSO Ag1P	1	92,5	6,5	/	650-825	800	8,1	250	/	/
URSO Ag2P	2	91,7	6,3	/	643-788	740	8,2	250	CuP 279	/
URSO Ag5P	5	89	6	/	645-815	710	8,2	250	CuP 281	BCuP-3
URSO Ag6P	6	87	7	/	643-813	720	8,3	250	CuP 283	BCuP-4
URSO Ag6PN	6	87	7	0,15 Ni	643-813	720	8,3	250	CuP 283a	/
URSO Ag15P	15	80	5	/	645-800	700	8,4	250	CuP 284	BCuP-5
URSO Ag18P	18	76	6	/	643-660	650	8,4	250	CuP 285	/



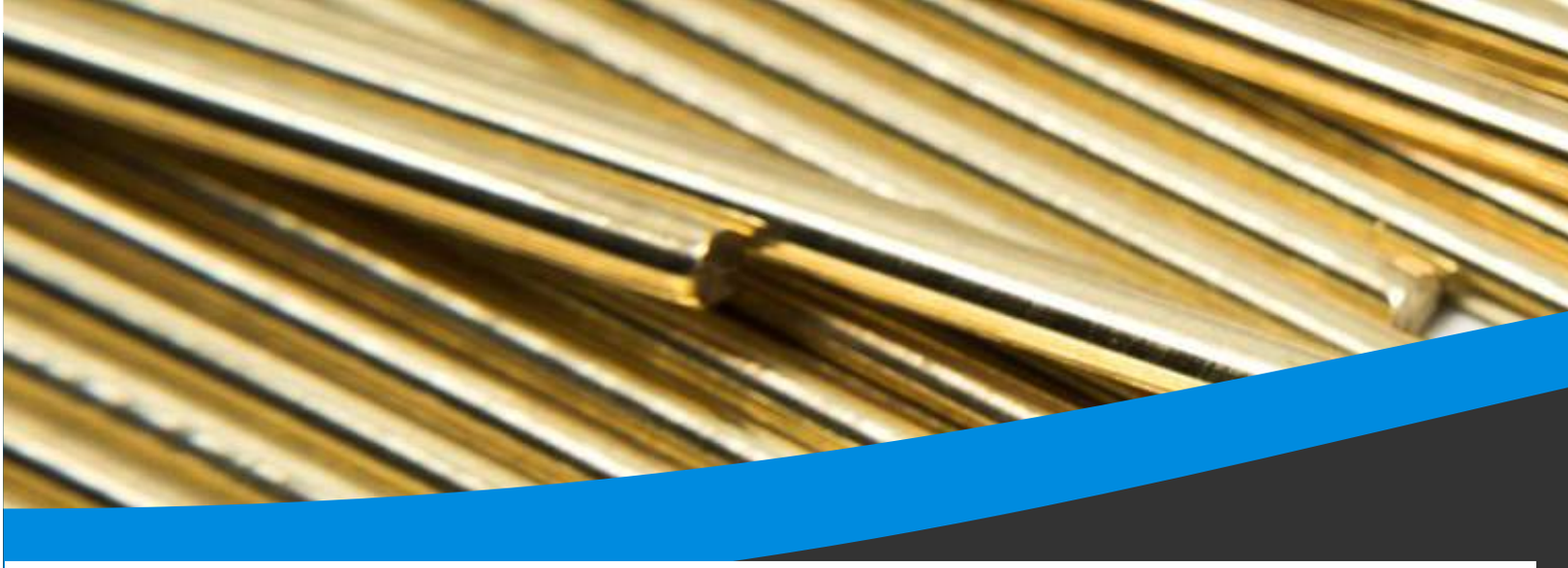
Available forms		
Bare Rods	Ø : from 0,5 mm to 4 mm	length: 500 mm and 1000 mm, other length upon request
Fluxcoated Rods	Ø : from 1,5-2/2,4/3 to 4 mm	standard, reduced, very reduced or Super reduced coating, 22 colors available, printing upon request
Fluxcoated Rods and Wire	Ø : from 2 to 5 mm	bare rods: length: 500 mm, wire on spools
Wire	Ø : from 1,5 to 3 mm Ø > 3 mm upon request	coils or SD 300 K spools
Thin Wire	Ø : from 0,3 to 1,4 mm Ø < 0,4 mm nupon request	coils or DIN 125 or DIN 80 reels.
Strips	thickness from 0,1 to 1 mm	width from 2 to 50 mm, other dimensions upon request
Sandwiched Alloys Trifoil	thickness from 0,4 to 0,8 mm	width from 2 to 80 mm, other dimensions upon request
Rings and preforms	/	according to the customers' specifications
Fluxes	powder	100g /250g /500g /1kg /5kg /10kg /25kg
Fluxes	paste	100g /250g /500g/1kg /5kg /10kg
Fluxes	liquid	0,5l /1l /2,5l



FLUXES

In order to ensure homogeneous and consistent quality, our fluxses are manufactured from the highest quality raw material with a quality guarantee. The choice of the appropriate flux depends on the melting range of the solder as well as on the characteristics of the flux itself (flow, capillary and lifetime).

Code	Available forms	Flow	Melting Range °C	EN 1045:2001	Life
F-1	powder, paste	very good	530-750	Fh 10	media
FLUX 1100	powder, paste	good	550-800	Fh 10	very long
FLUX BLACK PASTE	paste	good	600-1000	Fh 10	very long
DRY FLUX	powder, paste	good	550-850	Fh 10	very long
FLUX 751	paste	good	550-800	Fh 10	media
FLUX 16/14	powder, paste	very good	530-750	Fh 10	media



BRASSES

These filler metals are employed with good effect in the brazing of mild steel assemblies such as bicycle frames and wheelchairs. They can be used on steels, copper and copper alloys, nickel, nickel-based alloys and stainless steel where corrosion resistance is not a major requirement. The difference in composition between one filler material and another have poor effects on their performance and brazing characteristics. The addition of silicon enhances the smoothness of the resultant fillet. The addition of silver and tin helps flowing characteristics despite melting range is not much lowered. These filler metals with the addition of manganese and nickel are substantially stronger than the conventional copper-zinc alloys. URSO Brass 110 is often used for brazing tungsten carbides. A high temperature flux is required or the use of fluxcoated rods is suggested.

Code	Composition %							Melting Range	Density	International Specification	
	Ag	Cu	Zn	Sn	Mn	Ni	Si	°C	g/cm3	ISO 17672	AWS 5.8
URSO Brass 1	/	60	Bal	/	/	/	0,3	875-895	8,2	Cu 470	/
URSO Brass 2	/	60	Bal	0,2	0,2	/	0,3	870-900	8,2	Cu 670	/
URSO Brass 3	/	60	Bal	0,4	0,2	/	0,1	870-890	8,3	Cu 471	/
URSO Brass Ag1	1,2	59	Bal	/	/	/	0,3	860-890	8,2	/	/
URSO Brass 23	/	57	Bal	/	/	2	0,1	860-890	8,2	/	/
URSO Brass 104	/	57	Bal	/	/	4	/	860-910	8,3	/	/
URSO Brass 110	/	48	Bal	/	/	10	0,2	900-930	8,4	Cu 773	RBCuZn-D

Fluxcoated rods are also available. They are a good alternartive to the use of liquid flux for its performances and for the final quality of the joint. The coating flux guarantee a better protection against the oxidation arise from the heating process of the filler metal during the brazing operation.

Bare Rods	Fluxcoated Rods	Melting Range	International Specification		
		°C	ISO 17672	EN 17672	EN 1045
URSO Brass 1	FLUXBRASS 1	875-895	Cu 470a	/	Fh 21
URSO Brass 2	FLUXBRASS 2	870-900	Cu 670	/	Fh 22
URSO Silver brass	FLUXSILVERBRASS	860-890	/	/	Fh 23
URSO Brass 110	FLUXBRASS 110	900-930	Cu 773	/	Fh 24

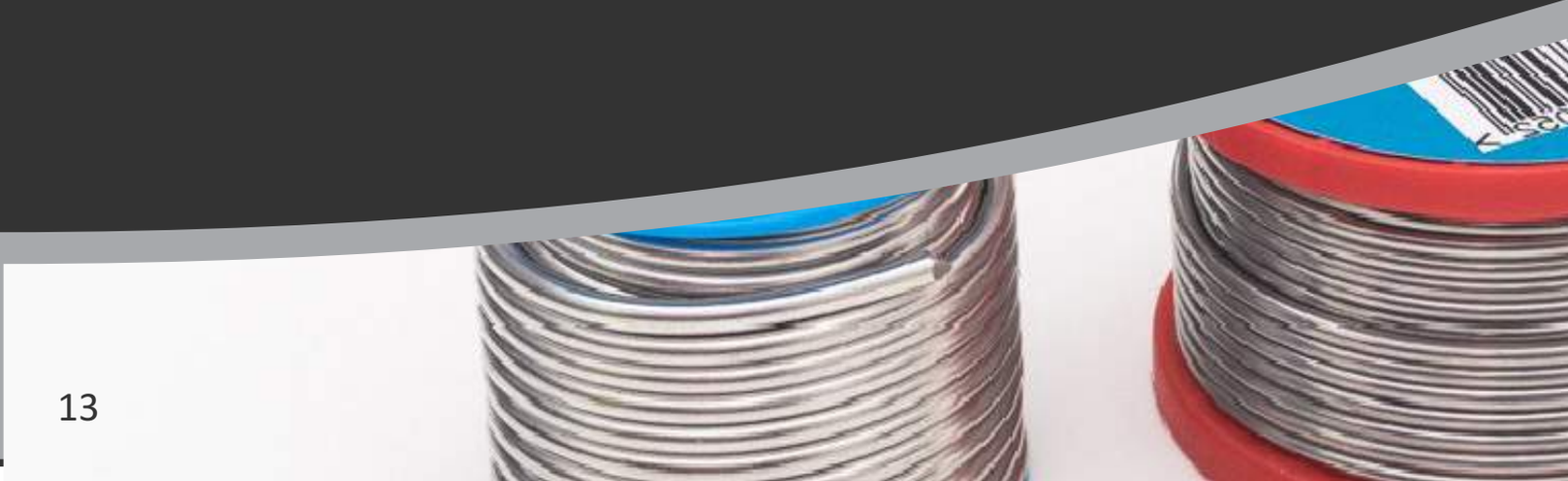
Code	Available forms	Flow	Melting range °C	EN 1045	Life
TALILO BORICHAIN	powder, paste	good	600-1000	Fh 21	very long

ALUMINIUM BRAZING ALLOYS

The URSO ALU filler metals are used to join brazeable aluminium base metals. Silicon and copper lower the melting point of aluminium and these elements are added to pure aluminium to produce suitable brazing filler metals. These alloys can be used because they melt below the solidus of brazeable base metals. URSO ALU 12 is a general purpose filler metal, it is used with all brazing processes, with some casting alloys and where limited flow is required. It is supplied in wire or rod for manual application. URSO ALU 2 and URSO ALU 22 are developped for aluminium soldering too (copper-aluminium and brass-aluminium joints). These alloys have wide use in tube joining for heat exchangers applications and automotive. URSO ALU 2 and URSO ALU 22 are supplied also fluxcored.

Code	Composition %					Melting Range	International Specification		
	Al	Si	Mg	Mn	Zn	°C	ISO 17672	AWS A5.8	ISO 3677
URSO ALU 5	Bal	5	/	/	/	575-630	Al 105	4043(AWS A5.10)	/
URSO ALU 12	88	12	/	/	/	575-585	Al 112	BAlSi-4	/
URSO ALU 2	2	/	/	/	98	376-385	/	/	S-Zn98Al2
URSO ALU 22	22	/	/	/	78	426-482	/	/	S-Zn78Al22

Code	Available forms	Melting range °C	EN 1045	Application
Flux ALU	powder	520-630	Fh 11	For use with URSO ALU 12 alloy - non corrosive flux.



SOFT SOLDERS

The primary criterion used to select the soft solder alloys is its melting properties. URSO Sn63Pb37, URSO Sn40Pb60 and URSO Sn50Pb50 are the most widely used in electronics (assembly of circuits boards) and structural applications such as the assembly of conduits for non potable water, industrial fluids, compressed gas products and vacuum assemblies.URSO Sn20Pb80 has a wider pasty range that provides greater workability. URSO Sn99,9 is suggested where lead-tin alloy are not allowed. The adding of the silver or silver-copper improves the strength and spreading and lowers the melting temperature, when compared to URSO Sn99,9. URSO Sn96,5Ag3,5 and URSO Sn95Ag5 are used extensively in plumbing applications for potable water and food handling equipments. In URSO Sn95Sb5 the adding of antimony improves monotonic and creep strength of the solder. All these soft solders must be used with flux FLOW 707, that removes the thin tarnish layers during the initial stages of the soldering process, thereby permitting the molten solder to react to substrate and to spread.

Code	Composition %							Melting Range	International Specification	
	Sn	Pb	Ag	Cu	Cd	Zn	Sb	°C	ISO 9453	ISO 3677
URSO Sn99,9	99,9	/	/	/	/	/	/	232	/	Sn100
URSO Sn97Cu3	97	/	/	3	/	/	/	227-310	402	Sn97Cu3
URSO Sn93Cu7	93	/	/	7	/	/	/	240-330	/	Sn93Cu3
URSO Sn96,5Ag3,5	96,5	/	3,5	/	/	/	/	221	703	Sn96Ag4/(Sn96,5Ag3,5)
URSO Sn95Ag5	95	/	5	/	/	/	/	221-240	704	Sn95Ag5
URSO Sn5Pb93Ag2	5	93	2	/	/	/	/	296-301	191	Pb93Sn5Ag2
URSO Sn62Pb36Ag2	62	36	2	/	/	/	/	179	171	Sn62Pb36Ag2
URSO Sn95Sb5	95	/	/	/	/	/	5	235-240	201	Sn95Sb5
URSO Sn91Zn9	91	/	/	/	/	9	/	199	801	Sn91Zn9
URSO Sn63Pb37	63	37	/	/	/	/	/	183	101	Sn63Pb37
URSO Sn50Pb50	50	50	/	/	/	/	/	183-215	111	Pb50Sn50
URSO Sn40Pb60	40	60	/	/	/	/	/	183-238	114	Pb60Sn40
URSO Sn35Pb65	35	65	/	/	/	/	/	183-245	115	Pb65Sn35
URSO Sn30Pb70	30	70	/	/	/	/	/	183-255	116	Pb70Sn30
URSO Sn20Pb80	20	80	/	/	/	/	/	183-280	117	Pb80Sn20
URSO Sn50Pb32Cd18	50	32	/	/	18	/	/	145	115	Sn50Pb32Cd18
URSO Sn50Pb48Ag2	50	48	2	/	/	/	/	178-215	/	Sn50Pb48Ag2
URSO Sn60Pb40	60	40	/	/	/	/	/	183-190	103	Sn60Pb40E
URSO Sn60Pb38Cu2	60	38	/	2	/	/	/	183-191	/	Sn60Pb38Cu2
URSO Sn95,5Ag3,8Cu0,7	95,5	/	3,8	0,7	/	/	/	217	713	Sn95,5Ag3,8Cu0,7
URSO Sn99,3Cu0,7	99,3	/	/	0,7	/	/	/	227	401	Sn99Cu1/DIN EN 29453
URSO Pb67Sn33	33	67	/	/	/	/	/	183-250	/	Pb67Sn33
URSO Sn97Ag3	97	/	3	/	/	/	/	221-224	702	Sn97Ag3

FLUXES FOR SOFT SOLDERING

Code	Available forms	Flow	Melting Range °C	Life
FLOW 707	paste	good	180-350	media

Z-02	Soldering liquid for copper, copper alloys, and lead (the lead glass) 311A/DIN EN 29454-1
Z-04	Solder liquid solder titanium zinc, fine zinc and galvanized steel sheets 322A/DIN EN 29454-1, first F-SW11/DIN8511
Z-04-S	Solder liquid solder titanium zinc, fine zinc and galvanized steel sheets specifically designed for use on building sites 322A/DIN EN 29454-1, first F-SW11/DIN8511
A-014	Solder liquid solder stainless steel, and coated stainless steel 322A/DIN EN 29454-1, first F-SW11/DIN8511

SOLDER PASTE

URSO Sn96.5Ag3.0Cu0.5, in jars 500g

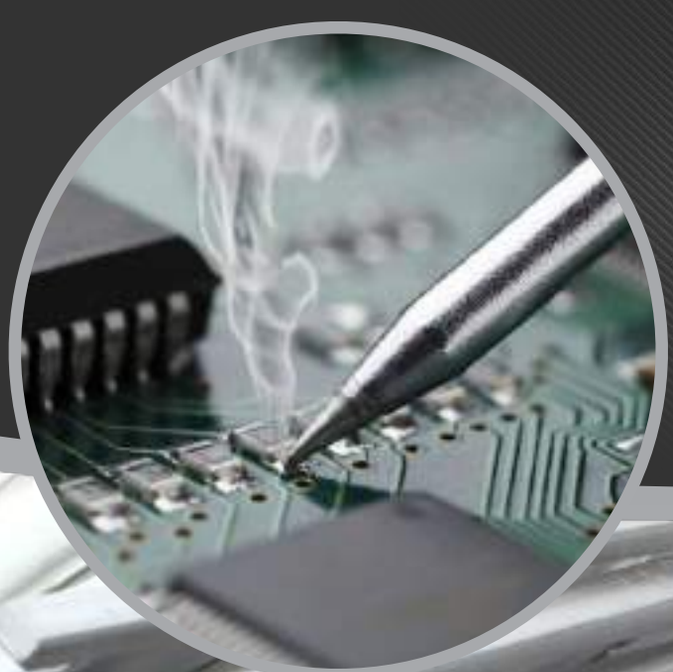
URSO Sn98.5Ag1.0Cu0.5, in jars 500g

URSO Sn99.3/Cu0.7, in jars 500g

URSO Sn62/Pb/Ag2, in jars 500g

Solder paste lead free in syringes 5 ccm; 10 ccm; 30 ccm

Stencil cleaner (STC); PCB-cleaner (PCBC) (1l, 5l, 10l)
SMT adhesive 10R or 25R SC61-series
SMT adhesives are used in surface-mount assemblies on PCB to fix components to the board during wave soldering or double sided reflow. The adhesive is used to bond the Surface-Mount Device (SMD) to the PCB, in order to avoid displacement of components during high speed processes.



OTHER ARTICLES FROM SILVER

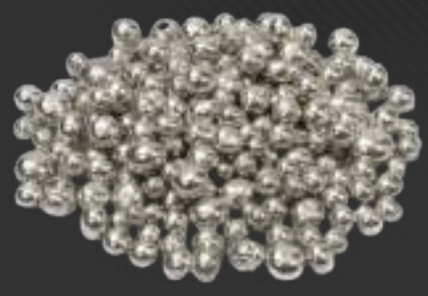
CONTACT RIVETS

Code	Composition (Ag is balance) %	Melting Range	Density	Electrical conductivity	Mechanical properties (recrystallized state)		
		°C	g/cm^3	MS/m	Rm [MPa]	A [%]	$HV_{0,2}$
Ag kontakt 99,99	Ag 99,9	960	10,5	60	155-215	40	30
Ag kontakt Ni0,15	Ni 0,10-0,20	960	10,5	57	185-255	30	40
Ag kontakt Ni10	Ni 10,0	960	10,4	48	200-250	20	50
Ag kontakt Ni20	Ni 20,0	960	10,3	46	270-300	15	60
Ag kontakt Cu8	Cu 7,4-8,4	900-940	10,3	50	225-325	25	60
Ag kontakt Cd8	Cd 7,0-9,0	890-910	10,4	25	195-295	35	35
Ag kontakt Cd13	Cd 12,0-14,0	830-850	10,3	20	215-315	35	40
Ag kontakt CuO10	CuO 10,0	960	10,2	45	225-325	15	60
Ag kontaktn CdO10	CdO 10,0	960	10,3	49	225-325	15	60
Ag kontaktn CdO15	CdO 15,0	960	10,2	45	225-325	15	80
Ag kontakt SnO_2 (Bi_2O_3)	SnO_2 10,0	960	9,8	45	270	10	100

We manufacture all types of contact rivets. We adapt to the needs of our customers.

SILVER ANODE

Anode 600 x 200 x 10 mm or other dimensions to order.



GRANULATE

OTHER ARTICLES

PASTE FOR SOLDERING Sn97Cu3-Cu-Rofix3

It is used as a flux and the mixture is melted, and a binder powder for soldering. In any case, it is necessary to use another soft solder Sn97Ag3 or Sn97Cu3. Packed per 250g with a brush.

Benefits paste for soldering Sn97Cu3-Cu-Rofix3:

- Very good filling of the soldering gap and also provides the best strength
- Residual flux is very easy to remove because they are soluble in cold water and are easily washed out according to DIN 1988
- Since allowing clear identification of melting the solder, thereby soldering the appropriate temperature to prevent over heating pipes and fittings.

LOCTITE 55

Thread Sealing Cord - immediate full pressure sealing. Allows reliable re-adjustments.
LOCTITE® 55™ Pipe Sealing Cord is a non-curing, coated multifilament cord that seals out air and other common gases and fluids. Built-in cutter to easily apply the proper amount of cord. Recommended for sealing metal and plastic tapered pipe threads and fittings up to 4" NPT. Allows for post assembly adjustments. Tested in accordance with EN 751-2 Class ARp and DIN 30660
Certified to NSF/ANSI, Standard 61

NON-METALLIFEROUS CLEANING CLOTH

It is used to clean the ends of the copper tubes. You can use it a long time, because it is easy to clean by rinsing, blowing or shaking and then reapply.

- solvent resistant
- Do not cause metal fatigue
- Fast pipe cleaning without causing scratches

LINING DOR TERMAL PROTECTION

It is free of asbestos. The advantage of the non-woven fabric made of high quality fiber (fiber does not dissolve) and excellent strength textile fiber glass. It protects the surroundings against the soldering center diffuse flame burner. Avoid direct heat from the burner. The lining is resistant to a temperature of 300 ° C or up to 1000 °C at the short warming.

STEPS FOR A SUCCESSFUL BRAZING

1. Ventilation

Ensure there is sufficient ventilation: brazing operations should never be undertaken in confined areas or if there is not enough ventilation.

2. Joint gap

Ensure that, at brazing temperature, the brazing joit will have the proper clearance (for »in air« brazing with flux, proper gaps range normaly from 0,05 to 0,20 mm).

3. Pre-braze cleaning

Carefully and thoroughly clean the pieces to be brazed: join surfaces, must be free from any contaminant, such as oil, lubrificants, dust, grease, etc.

4. Fluxing

Apply a proper quantity of flux on the pieces in order to protect the joint surfaces from oxidation (note: when brazing copper to copper with copper-phosphorous alloys, no flux is necessary).

5. Assembly and fixturing

Assemble the pieces and ensure that they will maintain position and alignement during brazing (fixturing may be needed).

6. Heating

Heat evently and uniformly the joint area, insisting more on heavier sections. Do not try to melt the filler alloy by directly the flame on the rod.

7. Brazing

As soon as the pieces reach the brazing temperature, feed the rod in the joint area and let it melt and flow. Capillary action will draw the molten alloy inside of the joint. Avoid overheating, which might lead to damaged or deformed pieces, unsound joints, and emission of harmful fumes.

8. Post-braze cleaning

After brazing, allow the pieces to cool down and remove flux residues by washing an warm water, brushing, or other methods (chemical pickling, ultrasounds, etc.).

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