



Jinik Marketing



BRAZING FILLER MATERIALS

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SWASTIK WELD

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BRAZING FILLER MATERIALS

SILVER FILLER MATERIALS

- CADMIUM FREE SILVER BRAZING ALLOYS
- SILVER BRAZING ALLOYS WITH CADMIUM.
- SILVER FLUX CORED BRAZING ALLOYS

COPPER FILLER MATERIALS

- SILVER COPPER PHOSPHORUS BRAZING ALLOY
- COPPER PHOSPHORUS BRAZING ALLOYS
- BRASS BRAZING ALLOYS
- BRONZE WELDING ALLOYS

ALUMINUM FILLER MATERIALS

- ALUMINUM WELDING ALLOYS
- ALUMINUM FLUX CORED WELDING ALLOYS
- ALUMINUM FLUX CORED WELDING ALLOYS

POWDER FLUX AND PASTE FLUX

- SILVER FLUX POWDER/PASTE
- COPPER FLUX POWDER/PASTE
- ALUMINUM FLUX POWDER

Silver Brazing Alloys Cadmium Free

Description

- ✓ Cadmium-free silver brazing alloy is a kind of environmental friendly solder, suitable for brazing most ferrous metals except magnesium and aluminum. Capable of low melting point, good fluidity, large wetting angle, strong filling capacity, suitable for high frequency welding, flame welding, resistance welding and other welding methods. It has many advantages, such as high strength, good toughness, good conductivity, etc.
- ✓ Our cadmium-free alloys offer excellent performance characteristics and dependable results, while eliminating hazardous cadmium fumes.
- ✓ Besides, this solder does not contain any heavy metal components, is environmentally friendly, pollution-free, and is suitable for all walks of life.

Caution:

1. The warehouse where keep the filler metals of silver required with a dry and ventilated environment and avoid damp, keep away from water, acid, alkali and other highly volatile and corrosive liquids, the silver brazing alloys should be placed on a wooden pallet, avoid putting them directly on floor or close the wall.



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Silver Brazing Alloys **Cadmium Free**

REFERENCE	NORMS			MELTING RANGE °C	APPLICATION					
	EN 1044	AWS 5.8	DIN 8513		Ag%	Cu%	Zn%	Sn%	Ni%	
HZ-Ag10B	AG207	—	L-Ag10	815-850	10	53	37	—	—	Need high temp operation, could be used in the application of brazing copper alloy, steel, with low requirements.
HZ-Ag20B	AG206	—	L-Ag20	690-810	20	44	35.8	Si 0.2	—	Best economical alloy with large melting range. Outstanding wetting and flow characteristics make L-Ag20 an appropriate choice to join similar and dissimilar base metals.
HZ-Ag25B	AG205	—	L-Ag25	700-790	25	40	35	—	—	For copper and copper alloy, steel and stainless steel brazing
HZ-Ag25Sn	AG108	BAG-37	L-Ag25Sn	688-779	25	40	33	2	—	A general purpose silver brazing alloy with low cost. Exhibits moderate ductility and slightly higher melting temperature than alloys containing higher percentages of silver and or tin.
HZ-Ag30B	AG204	BAG-20	L-Ag30	677-766	30	38	32	—	—	A moderate temperature filler metal with flow characteristics useful for wider gaps, not suitable in the brazing of stainless steel.
HZ-Ag30Sn	AG107	—	L-Ag30Sn	665-755	30	36	32	2	—	Good wetting and liquidity, suitable for the brazing of steel, copper to copper, copper to brass, in the use of food and refrigeration industry.
HZ-Ag34Sn	AG106	—	L-Ag34Sn	630-730	34	36	27.5	2.5	—	Good wetting and liquidity, suitable for the brazing of steel, copper to copper, copper to brass, in the use of food and refrigeration industry.
HZ-Ag35B	AG304	BAG-35	—	685-754	35	32	33	—	—	Good toughness of joints, suitable in the use of brazing copper, copper alloy and steel in the refrigeration industry.
HZ-Ag40Sn	AG105	BAG-28	L-Ag40Sn	649-710	40	30	28	2	—	Good liquidity flow properties, widely used in the connecting of HVAC copper pipe, iron to non-iron steel welding. Excellent brazing performance in big gaps filling.
HZ-Ag45B	—	BAG-5	—	663-743	45	30	25	—	—	Excellent general purpose brazing alloy with good ductility and capillarity flow, the brazing joint can withstand shock load.
HZ-Ag45Sn	AG104	BAG-36	L-Ag45Sn	646-677	45	27	25	3	—	
HZ-Ag50B	—	BAG-6	—	688-774	50	34	16	—	—	Useful in brazing electrical connections, food machinery and material under vibration loading. It has a wide melting range suitable for bridging gaps where poor fit ups are encountered.
HZ-Ag50Ni	—	BAG-24	—	660-707	50	20	28	—	2	With high silver content; makes premium-quality brazes. Free-flowing with unsurpassed capillary attraction and deep penetration with high ductility. Suitable for use in the food processing industry.
HZ-Ag55Sn	AG103	—	L-Ag55Sn	630-660	55	21	22	2	—	Silver color is excellent match for stainless steel and silverware applications. For ferrous and nonferrous alloys. Often used to braze stainless steel.
HZ-Ag56Sn	AG102	BAG-7	L-Ag56Sn	618-652	56	22	17	5	—	



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Silver Flux- Cored Brazing Alloys

Description:

Silver flux cored wire it's not need to add no more flux, and it has solved the difficult and complex operation problems effectively. compared to traditional metal joining methods. It consists of a filler metal in strip form that is rolled around a powdered flux. For mostly instead of hand manual torch brazing, especially recommend for automatically brazing working cycle. The most characteristic feature of silver flux cored wire is good liquidity, no corrosion, no need cleaning and environment-friendly. It has been an ideal brazing material.

Application :

Widely used for brazing of copper, stainless steel and silver or silver alloy brazing with low melting point.
No need any flux in brazing.

REFERENCE	MELTING RANGE °C	CHEMICAL COMPOSITION (%)	SPECIFICATION	PACKAGE
HZ-YAg30Sn	650-750	Alloy: Ag:30,Cu:36,Zn:32,Sn:2 <i>Build in Silver Flux</i>	Φ1.6-Φ2.3	Length:500mm 1kg/bag OR 1kg/roll
HZ-YAg35B	685-755	Alloy: Ag:35,Cu:32,Zn:33 <i>Build in Silver Flux</i>	Φ1.6-Φ2.3	
HZ-YAg40Sn	649-710	Alloy: Ag:40,Cu:30,Zn:28,Sn:2 <i>Build in Silver Flux</i>	Φ1.6-Φ2.3	
HZ-YAg45B	663-743	Alloy: Ag:45,Cu:30,Zn:25 <i>Build in Silver Flux</i>	Φ1.6-Φ2.3	
HZ-YAg56Sn	618-652	Alloy: Ag:56,Cu:22,Zn:17,Sn:5 <i>Build in Silver Flux</i>	Φ1.6-Φ2.3	

seamless !



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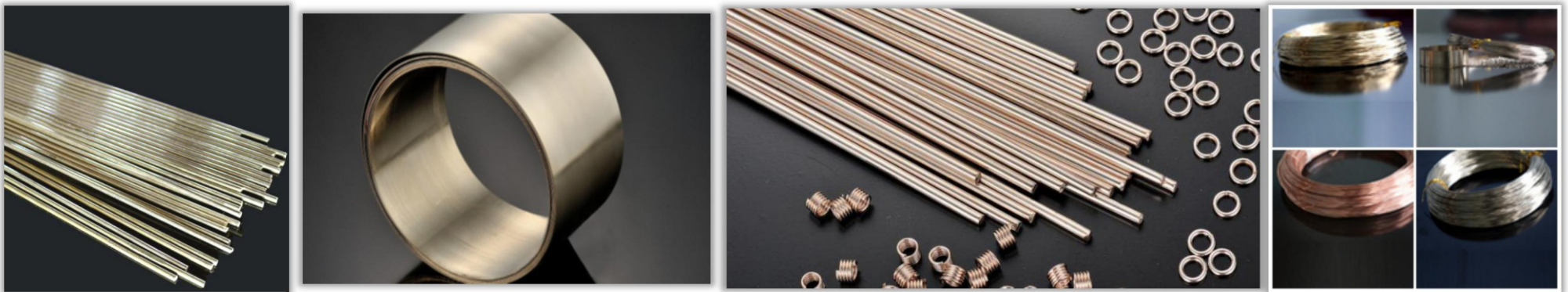
Silver Brazing Containing Cadmium Alloys

Description

- ✓ Cadmium-containing silver brazing alloy is the most commonly used low-temperature silver solder.
- ✓ Cadmium in the solder can significantly reduce the temperature of the solder, and can better wet various kinds of ferrous metals. It has better fluidity and strength (commonly referred to the multi-alloy materials containing manganese, manganese and nickel).
- ✓ The welding environment should be ventilated, the welding speed should be fast, and the welding process should be used with Silver solder powder or silver solder paste.

NOTE:

1. It must be worn overalls and use the necessary protective measures when welding.
2. For a long time heating will makes zinc, cadmium, and other metal evaporation, also will occur unnecessary influence on brazing seam. so the welding time as quickly as possible.
3. Must use it in ventilated place, because of welding smoke is harmful to the body.



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Silver Solder Containing Cadmium Alloy

REFERENCE	NORMS			MELTING RANGE °C	CHEMICAL COMPOSITION					APPLICATION
	EN 1044	AWS 5.8	DIN 8513		Ag%	Cu%	Zn%	Cd%	Ni%	
HZ-Ag10C	—	—	—	810-900	10	45	35	10	—	Low cost solder, suitable in the application of braze copper to copper alloy, steel and stainless steel brazing.
HZ-Ag20C	AG309	—	L-Ag20Cd	605-765	20	40	25	15	—	For copper and copper alloy ,steel and stainless steel brazing.
HZ-Ag25C	AG307	BAg-33	L-Ag25Cd	607-682	25	30	27	18	—	Low melting point,good for art ,for copper alloy,steel and stainless steel brazing.
HZ-Ag25CNI	—	—	—	720-815	25	33	27	13	2	low melting point, Joint strength good, For copper and copper alloy ,steel and stainless steel brazing.
HZ-Ag30C	AG306	BAg-2a	L-Ag30Cd	607-710	30	27	23	20	—	Excellent brazing ability for the filling of large gap clearance.
HZ-Ag35C	AG305	BAg-2	L-Ag35Cd	607-702	35	26	21	18	—	Used for joining most ferrous and non-ferrous metals.Has good brazing properties and is suitable either for pre-placement in the joint or for manual feeding into the joint.
HZ-Ag40C	AG304	—	L-Ag40Cd	595-630	40	19	21	20	—	With very low melting point, narrow melting range, and excellent flow properties.It can be used to join ferrous, non ferrous and dissimilar metals and alloys, such as steel, copper, copper alloys, nickel, nickel alloys, with close joint clearances.
HZ-Ag40CNI	—	—	—	605-705	40	16	18	25.8	0.2	To do grading last level of brazing soldering brazing temperature minimum ,process performance and joint properties are prefect.
HZ-Ag45C	AG302	BAg-1	L-Ag45Cd	607-618	45	15	16	24	—	Used for joining steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals.
HZ-Ag50C	AG301	BAg-1a	L-Ag50Cd	627-635	50	15	17	18	—	Good joint strength, brazing machinability and manufacturer ability, suitable for copper alloy, steel and stainless steel brazing.



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SILVER PHOSPHORUS COPPER ALLOYS

- ✓ Silver phosphor copper brazing alloy has good liquidity, cheap, craft excellent performance characteristics, brazing of copper and silver. Suitable for copper solder resistance welding, gas flame welding, high frequency brazing and some furnace brazing, soldering welding head has good strength and electric conductivity.
- ✓ Widely used in motor manufacturing & instrumentation industry, suitable for brazing copper and copper alloy, silver, molybdenum and other metal, most used for brazing impact vibration load of smaller work, the most widely used in motor manufacturing.



REFERENCE	NORMS			MELTING RANGE °C	CHEMICAL COMPOSITION				APPLICATION
	EN 1044	AWS 5.8	DIN 8513		Ag%	Cu%	P%	Ni%	
HZ-Ag0.5P	—	—	—	710-740	0.5	93.5	6	—	Tighten joints. Used extensively in the Heating, Ventilating and Air Conditioning (HVAC) industry to make perform rings for evaporators condensers.
HZ-Ag1P	—	—	—	645-810	1	92.6	6.4	—	Using for brazing copper and copper brazing parts.
HZ-Ag2P	CP105	BCuP-6	L-Ag2P	732-816	2	91	7	—	Low melting point, easy flow, suitable for small gap-tie-in
HZ-Ag5P	CP104	BCuP-3	L-Ag5P	718-816	5	89	6	—	Use for brazing copper and copper, copper and brass parts of air condition, freezer and electric motor.
HZ-Ag6P	CP103	BCuP-4	—	645-725	6	86.8	7.2	—	Easy flow, good solder ability. can apply for spectacle-frame and ERW.
HZ-Ag10P	—	—	—	645-790	10	84	6	—	Easy flow and well brazing toughness. can be made into ribbon brazing copper and copper alloy in spectacle frame.
HZ-Ag15P	CP102	BCuP-5	L-Ag15P	704-816	15	80	5	—	This very popular alloy offers superior ductility and strength. It is suitable for wide gap applications. Joint clearances of 0.002-0.006". Easy to use, good control. Used extensively in copper tube joining applications.
HZ-Ag18P	CP101	BCuP-8	L-Ag18P	664-686	18	85.4	6.6	—	Eutectic crystal Used for copper and copper alloy tie-in in electric motor and electrical appliance.

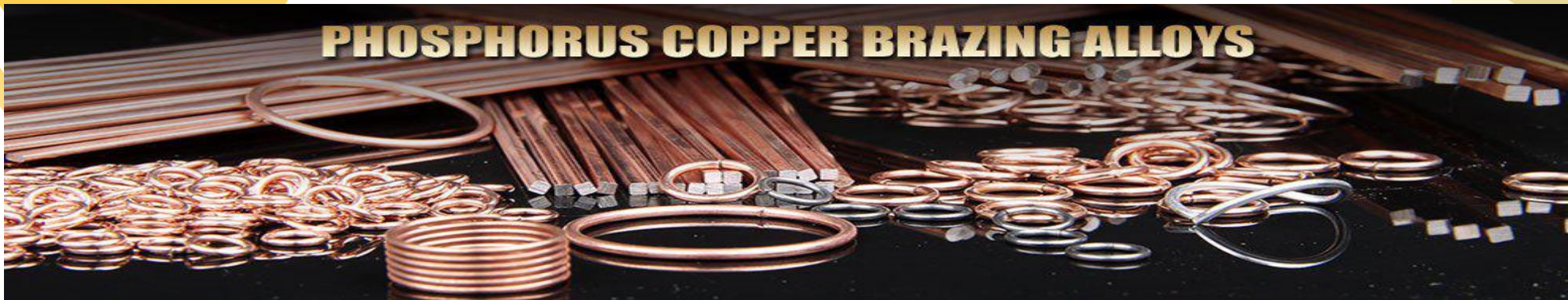
NOTE: Brazing copper, without flux, brazing copper alloy, please use the silver flux powder or silver flux paste.



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PHOSPHORUS COPPER BRAZING ALLOYS



COPPER PHOSPHORUS BRAZING ALLOYS

Copper-Phosphorus alloys have outstanding brazing properties and wide capabilities. Phosphorus will alloy readily with copper. Phosphorus is a reducing agent for copper and also deoxidizes silver. These brazing alloys of copper-phosphorus and silver-copper phosphorus are self-fluxing on pure copper.

The reduction of phosphorus and additions of silver have a profound effect upon the fluidity of brazing alloys. The alloys of higher phosphorus content are extremely fluid, while the lower phosphorus, high silver alloy has a broad plastic range. Even small adjustments in alloy percentages have a marked effect on brazing alloy fluidity.

REFERENCE	NORMS			MELTING RANGE °C	WORKING TEMPERATURE °C	CHEMICAL COMPOSITION			APPLICATION
	EN 1044	AWS 5.8	DIN 8513			Cu%	P%	Other%	
HZ-CuP8	CP201	—	L-CuP8	710-793	730	Rem.	7.5	—	Suitable for air condition, refrigerator, evaporator, heat exchange and water heater etc.
HZ-CuP7	CP202	BCuP-2	L-CuP7	710-785	730	Rem.	7.0	—	
HZ-CuP6	CP203	—	L-CuP6	710-843	760	Rem.	6.2	—	Applicable to copper brazing, a good choice in case of where joint tolerances cannot be maintained.
HZ-CuPSn	CP302	BCuP-9	—	637-675	700	Rem.	7	Sn7	Low-cost and extremely fluid alloy, suitable for tight-fitting joints. For joining copper to copper or copper alloys where strong impacts and vibrations are not encountered.



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BRASS & BRONZE WELDING ALLOYS

Description

Brass brazing alloys also called Copper-Zinc brazing alloys, could be divided into normal brass alloy and special brass alloy. Different from normal brass alloy, special brass alloy is a multi-component copper alloy composed with Sn, Mn, Ni, Fe, Si and other elements. Special brass alloys have better brazing properties than normal copper-zinc alloys. It could provide better brazing strength, higher corrosion resistance, more convenient brazing process, etc.

For example, the addition of Sn can reduce the melting point of common copper-zinc alloy, make brazing temperature lower and easier to operate; the addition of Mn can improve the strength of copper-zinc alloy, more suitable for the use of cemented carbide products.

Application

Alloy often used with liquid flux dosed directly on the torch flame through the appropriate vaporizer.

Used as filler or for reconstructing gear teeth, bearings, shafts, valve seats, steering joints, handlebars and bicycle frames, metal furniture, pipes, etc.

REFERENCE	NORMS				MELTING RANGE °C	CHEMICAL COMPOSITION (%)								
	EN.	AWS	DIN.	ISO		Cu	Zn	P	Sn	Si	Pb	Al	Mn	Fe
HZ-S201	C14180	BCu-1	-	-	1075	Min99.90	-	0.075	-	-	0.02	Max0.01	-	-
HZ-S221	SCu47000	RBCuZn-A	-	-	888-899	57-61	Rem.	-	0.25-1.0	0.3	0.05	0.01	-	-
HZ-S226	SCu68000	RBCuZn-B	-	-	866-882	56-60	Rem.	Ni 0.2-0.8	0.8-1.1	0.04-0.2	0.05	0.01	0.01-0.5	0.25-1.2
HZ-S222	SCu68100	RBCuZn-C	-	-	866-888	56-60	Rem.	-	0.8-1.1	0.04-0.15	0.05	0.01	0.01-0.5	0.25-1.2
HZ-S223	SCu77300	RBCuZn-D	-	-	921-935	46-50	Rem.	0.25	-	0.04-0.25	0.05	0.01	-	Ni9.0-11.0
HZ-S211	SCu6560	ERCuSi-A	SG-CuSi3	CuSi3Mn	910-1025	Rem.	Max1	-	Max1	2.8-4.0	Max 0.02	Max0.01	1.5	-
HZ-S212	SCu5180	ERCuSn-A	SG-CuSn6	CuSn5P	910-1040	Rem.	Max0.1	0.01-0.4	4-6	-	Max 0.02	Max0.01	-	-
HZ-S213	SCu5210	ERCuSn-C	SG-CuSn9	CuSn8P	875-1025	Rem.	Max0.2	0.01-0.4	7.5-8.5	-	Max 0.02	Max0.01	-	0.1
HZ-S214	SCu6100	ERCuAl-A1	SG-CuAl8	CuAl7	1030-1040	Rem.	Max0.2	-	-	Max 0.1	Max 0.02	6.0-8.5	Max0.5	-



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AL & Cu-AL Flux-Cored Alloys

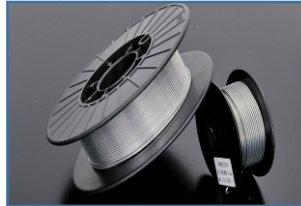
Flux Build In Aluminum Welding Wire

seamless !

AL flux-cored welding rods



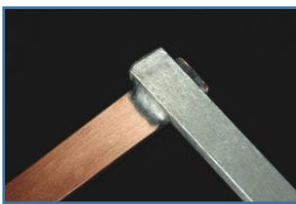
Al Flux-Cored Rods



Cu-AL Flux-Cored Wires



Al Flux-Cored Rings



Al-Cu Welding



Al Flux-Cored Welding Rod

DESCRIPTION:

According to the differences of the chemical composition, it could be divided into aluminum to aluminum brazing flux cored wire, copper to aluminum brazing flux cored wire, silver brazing flux cored wire. Different from brazing wires with seam, the flux inside of the seamless brazing wire is more uniform and evenly distributed.

It will not lead to powder breakage or leakage, could perfect the brazing effect.

Providing even and full connection during the brazing operation, higher strength, friendly environmental, good moisture resistance, stable brazing performance, ect.

APPLICATIONS:

Used for brazing of aluminum-copper, aluminum-aluminum, and suitable for automatic brazing, suitable for kinds of hot forging die hammer, heat-resistant.

REFERENCE	MELTING RANGE °C	CHEMICAL COMPOSITION	APPLICATION
HZ-A112	577-582	Al: 88% Si:12% Flux: K3AlF-KAlF4(12%)	HZ-A112 is the newly developed filler metal, can instead of HZ-4047 solder wire, without adding any flux when brazing process. It meets the demand of automatic
HZ-AL02	380-410	Zn 98% , Al 2% , Flux: AlCsF3(12%)	HZ-A102 is the ordinary and common filler metal, used widely for brazing copper to aluminum, AL to AL , with low melting point and lowest price.
HZ-A122	350-400	Zn 78% , Al 22% , Flux: AlCsF3(12%)	HZ-A122 with high aluminum containing is the Copper-Aluminum filler metal, it can Braze copper to AL, AL to AL , higher strength and better flow than HZ-A102.

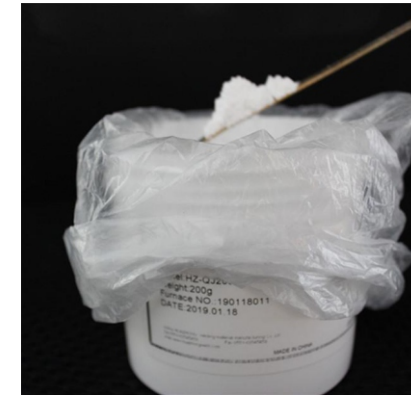


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Fluxes for Silver Brazing

Product Code	Standards	Form	Chemical Composition	Packages	APPLICATION
	AWS A5.31				
HZ-QJ101	-	powder	KBF ₄ ,H ₃ BO ₃	50 g• 227 g• 500 g	White Silver Flux Powder used with silver brazing alloys. Application temperature is 550 °C-880 °C. Brazing copper and copper alloy, carbon, steel, stainless steel.
HZ-QJ102	FB3-F	powder	KBF ₄ ,KF H ₃ BO ₃	50 g• 227 g• 500 g	
HZ-QJ305	-	paste	KBF ₄ ,KF,B ₂ O ₃ ,H ₂ O	114 g• 500 g• 1000 g	White Silver Flux Paste, best use with silver alloy brazing. TEMP: 500 °C-920 °C.



Fluxes For Aluminum Brazing

Product Code	Standards	Form	Chemical Composition	Packages	APPLICATION
	AWS A5.31				
QJ-201	FB1-A	powder	LiCl,KCl,NaCl,ZnCl	50 g• 227 g• 500 g	Corrosive AL flux white powder ,most widely used. TEMP: 560 °C-585 °C.
QJ-208	FB1-B	powder	K1-3ALF4-6	25kg/bag	Noncorrosive AL flux powder, usually used in furnace brazing. TEMP: 570 °C.
QJ-209		powder	AlCsF ₃	500g, 1000g	Noncorrosive AL flux powder, brazing with Zn-AL alloy. TEMP: 350 °C-450 °C.



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