

# SILVALOY™ HIGH SILVER BRAZING ALLOYS

WOLVERINE JOINING TECHNOLOGIES SILVALOY™ High Silver Brazing Alloys offer our customers the industry's most diverse range of alloy solutions. Most have silver contents of 20% or more, alloyed with copper, zinc and a range of other elements. Whatever the need, there is a SILVALOY™

Brazing Alloy for your application: high or low temperature; torch, furnace, induction or vacuum brazing; to join most ferrous alloys, all copper and copper alloys, all nickel alloys, precious metals and tungsten carbides. For a complete list of SILVALOY™ Brazing Alloys, see table on Pages 10&11.



SILVALOY™ High Silver Brazing Alloys are available in a wide variety of forms: wire, rod, strip, rings, washers and specialty shapes. WOLVERINE JOINING TECHNOLOGIES can supply your SILVALOY™ Brazing Alloy in the exact volume, size, form or shape to meet your metal joining needs.

800-225-2130 www.silvaloy.com

## SILVALOY™ Ag-Cu-Zn-Cd Alloys:

The SILVALOY™ line of cadmium-bearing alloys are free-flowing, versatile, high-strength alloys that have the lowest melting points of all the silver-based filler metals. This family of alloys is available in a wide range of compositions to match a wide range of technical needs and cost considerations.

## SILVALOY™ Cadmium-Free Alloys:

SILVALOY™ cadmium-free alloys are available in a similarly wide range of compositions, for a wide variety of applications. While free-flowing, ductile and strong, cadmium-free alloys tend to require higher brazing temperatures than do cadmium-bearing alloys.

## SILVALOY™ Nickel-Based Alloys

The presence of nickel in SILVALOY™ Brazing Alloys promotes wetting of difficult-to-braze metals such as tungsten carbide, stainless steel, tool steel, nickel and nickel alloys. Nickel may also improve corrosion resistance.

Ag-Cu-Zn-Cd Family Alloys - Specifications and Properties

Silvaloy™	Chemical Composition				Melting Range		AWS Spec. A5.8 Class
	Silver	Copper	Zinc	Cadmium	Solidus	Liquidus	
	Ag%	Cu%	Zn%	Cd%			
Silvaloy 50	50	15.5	16.5	18	1160° F	1175° F	BAG 1a
Silvaloy 45	45	15	16	24	1125° F	1145° F	BAG 1
Silvaloy 35	35	26	21	18	1125° F	1295° F	BAG 2
Silvaloy 30	30	27	23	20	1125° F	1310° F	BAG 2a
Silvaloy 25	25	35	26.5	13.5	1125° F	1375° F	BAG 27
Silvaloy 25L	25	30	27.5	17.5	1125° F	1260° F	BAG 33

Cadmium Free Alloys - Specifications and Properties

Silvaloy™	Chemical Composition						Melting Range		AWS Spec. A5.8 Class
	Silver	Copper	Zinc	Tin	Nickel	Solidus	Liquidus		
	Ag%	Cu%	Zn%	Sn%	Ni%				
Silvaloy A56T	56	22	17	5	—	—	1145° F	1205° F	BAG 7
Silvaloy A49NM	49	16	23	—	4.5	7.5	1260° F	1290° F	BAG 22
Silvaloy A-45	45	30	25	—	—	—	1225° F	1370° F	BAG 5
Silvaloy A-40T	40	30	28	2	—	—	1200° F	1310° F	BAG 28
Silvaloy A-40L	40	30.5	29.5	—	—	—	1245° F	1340° F	—
Silvaloy A-38T	38	32	28	2	—	—	1200° F	1330° F	BAG 34
Silvaloy A-30	30	38	32	—	—	—	1250° F	1410° F	BAG 20

Nickel Bearing Alloys - Specifications and Properties

Silvaloy™	Chemical Composition					Melting Range		AWS Spec. A5.8 Class
	Silver	Copper	Zinc	Cadmium	Nickel	Solidus	Liquidus	
	Ag%	Cu%	Zn%	Cd%	Ni%			
Silvaloy 50N	50	15.5	15.5	16	3	1170° F	1270° F	BAG 3
Silvaloy A-50N	50	20	28	—	2	1220° F	1305° F	BAG 24
Silvaloy A-40N2	40	30	28	—	2	1220° F	1435° F	BAG 4



## SILVALOY™ Flux-Coated Rods

Many of our SILVALOY™ High Silver Brazing Alloys are available as Flux-Coated Rods. Flux-Coated Rods offer increased ease of application, faster brazing time and controlled flux usage. Silvaloy A50N, A38T and A56T are among our standard Flux-Coated Rods. The alloy, size and flux thickness can be customized to your needs.

## SILVALOY™ Plymetal

SILVALOY™ plymetals consist of two layers of brazing alloy clad onto a copper core, and are used for brazing carbides onto tool steel, especially larger pieces. They are available in a standard 1:2:1 ratio, as well as others on request. SILVALOY™ Brazing Alloys available in plymetal form: 50N, A50N, A49NM and A40N2.

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