

# Aufhauser Silver Brazing Alloys Reference Guide

Product name	Description
<b>Phos Copper SilverAlloys</b>	
PhosCopper 0	Very fluid, fast flow and economical. Used with copper, brass, and bronze base metal with recommended joint clearance .001" to .003".
PhosCopper 2	Silver addition lowers solidus temperature, not as fluid as PhosCopper 0, gap clearance .001" to .003".
PhosCopper 5	Used when gap clearance range is .003 to .006". Ideal for larger copper pipe sizes.
PhosCopper 5F	For copper, brass or bronze. Slightly more fluid than PhosCopper 5 and PhosCopper 15. Used as preform rings for heat exchangers.
PhosCopper 6D	Developed to mimic performance of the PhosCopper 15 alloy at lower cost.
PhosCopper 6F	Reasonably fluid, similar to PhosCopper 0 in joint clearance of .001 to .003". Ideal flow as preform.
PhosCopper 15	Most versatile, easy to use. Best for unstable joint clearance (.002" to .006") and brazing temperature. High strength and ductility.
PhosCopper 18M	Automatic brazing of copper and copper products.
<b>Cadmium Bearing SilverAlloys</b>	
SilverAlloy Cd-20	Low silver at expense of broad melt range. Require rapid heating to prevent liquation.
SilverAlloy Cd-25	Less silver than SilverAlloy Cd-30 at the expense of increased melt temperature and range.
SilverAlloy Cd-25L	Similar to SilverAlloy Cd-25 but requires better heat control. Reduced melt range but more prone to oxidation.
SilverAlloy Cd-30	Less silver than SilverAlloy Cd-35 at the expense of increased melt temperature and range.
SilverAlloy Cd-35	Broader melt range than SilverAlloy Cd-45. Suitable for larger gap clearance and easier filleting.
SilverAlloy Cd-45	Lowest melting range in joining ferrous, non-ferrous and dissimilar metals with close joint clearance requirement.
SilverAlloy Cd-50	Similar to SilverAlloy Cd-45 properties with narrower melt range. Used on same base metals.
SilverAlloy Cd-50Ni3	Universal alloy in joining of carbide tool assemblies. Nickel addition improves corrosion resistance in marine environment and caustic media.
<b>Cadmium Free SilverAlloys</b>	
SilverAlloy A-5	Used for simultaneous brazing and heat-treating of steels. Improved ductility to the brass brazing alloys.
SilverAlloy A-9	Good color match to band instruments and other brass assemblies. Compatible to heat-treat cycles of carbon steel.
SilverAlloy A-20	Excellent temperature match to heat treatment of carbon steels. Good color match to yellow brass assemblies.
SilverAlloy A-25	Less silver than SilverAlloy A-30 at the expense of increased melt temperature and range. Moderate ductility.
SilverAlloy A-25T	Least silver of the Ag-Cu-Zn-Sn family. Moderate ductility limits joint design and application.
SilverAlloy A-30	Good for refrigeration assemblies where higher temperatures can be employed. Good for copper, nickel-silvers, and other non ferrous alloys.
SilverAlloy A-35	Dissimilar metals brazing in refrigeration tubing. Moderate melt temperature for ferrous and non-ferrous alloys.
SilverAlloy A-38T	Similar melt temperatures to cadmium-bearing SilverAlloy Cd-30 and SilverAlloy Cd-35. Suitable for ferrous and non-ferrous metals.
SilverAlloy A-40	For nickel, steel and copper alloys, good wide gap filling characteristics.
SilverAlloy A-40Ni2	Good corrosion properties with stainless steels. Often used in joining of tungsten carbides.
SilverAlloy A-40Ni5	Similar applications as SilverAlloy A-40Ni2 and A-50Ni2. with broader melt range for better gap filling characteristics.
SilverAlloy A-40L	Narrower melt range suitable for furnace brazing of steel, nickel, copper alloys. Good ductility.
SilverAlloy A-40T	Intermediate melt temperatures of the tin containing family. Used in joining ferrous and non ferrous.
SilverAlloy A-45	General purpose alloy for brazing of ferrous and non-ferrous metals. Excellent replacement to Cd containing alloys.
SilverAlloy A-45T	Good for dissimilar metals with moderate flow characteristics.
SilverAlloy A-49NM	Low temperature melting alloy for joining carbides and ferrous alloys.
SilverAlloy A-50	Widely used for electrical applications and in joining dissimilar metals.
SilverAlloy A-50Ni2	Used with 300 series stainless in Food, Medical and Dental fields. Good Cd free alternative for SilverAlloy Cd-50Ni3 in carbide brazing.
SilverAlloy A-50T	Similar to SilverAlloy A-56T at expense of increased melt temperature and range.
SilverAlloy A-54Ni1	Low zinc suitable for furnace brazing. Good for elevated service temperatures to 700 °F. used for carbon assemblies.
SilverAlloy A-56T	Excellent replacement to cadmium containing alloys when low melt temp. is required. Good corrosion properties. Color match to stainless.
SilverAlloy A-60	Similar to SilverAlloy A-65. Good for nickel and silver alloys.
SilverAlloy A-65	Third lowest melt alloy of the "Silversmith Alloys". Good color match to silver.
SilverAlloy A-70	Used on sterling silver, next lower melt temperature below SilverAlloy A-75 in step brazing.
SilverAlloy A-75	Used on sterling silver. Excellent color match to silver, highest melting of "Silversmith Alloys".
<b>Cd/Zn Free SilverAlloys</b>	
SilverAlloy B-7T	Good for vacuum and atmosphere brazing. A replacement to copper braze when lower melt temperature is required.
SilverAlloy B-56Ni2	Good for elevated application to 700 °F. Low zinc content reduces zinc deposit within furnace during brazing operation.
SilverAlloy B-60T	Excellent for furnace and vacuum brazing. Good corrosion resistance to marine environment.
SilverAlloy B-72	Good for atmosphere and vacuum furnace brazing of ferrous and non-ferrous alloys. Used in critical electronic and aerospace brazements.
SilverAlloy B-72Ni05	Similar to SilverAlloy B-72 Cd Free with nickel addition to impart improved corrosion properties with stainless steel.
SilverAlloy Z-75	Joining of steel and stainless steel assemblies that come into contact with ammonia (NH <sub>3</sub> ).
SilverAlloy Z-85M	Brazing of specialty steels and alloy used in high temperature service.
<b>Layered SilverAlloys</b>	
Layermet A-40Ni2	Similar to Layermet A-50Ni2 with higher brazing temperature, also exhibit good strength and wetting action on carbide.
Layermet A-40Ni5	Similar to Layermet A-40Ni2 with higher nickel for strength and corrosion resistance.
Layermet A-50Ni2	A popular cadmium-free tri-layered silver-copper-silver strip in 1/2/1 ratio that delivers superb performance in carbide brazing applications.
Layermet Cd-50Ni3	A cadmium bearing Layermet with exceptional strength, flow characteristics, and extremely low brazing temperature.