

NORTH AMERICAN ALLOY CO.

1617 Goid Street - Racine - Wisconsin - 53404 - USA

Phone/Fax: 262-634-5579 Email: sales@naalloy.com Web: www.naalloy.com

North American Alloy provides a variety of brazing alloys and preforms used in the brazing of HVAC/R and plumbing parts. We can provide industry standard preform shapes, customer specific preforms, or bulk alloys. Preforms are convenient for reliable and consistent braze alloy application. This is particularly useful in high volume applications. Bulk alloys are more convenient in low volume brazing applications or where hand application is preferred. Most braze alloys for the brazing of HVAC/R and plumbing items can be provided in a variety of preform styles or bulk material options. We would be happy to discuss your application and help with alloy or preform selection!

Brazing Products — HVAC/R Applications



Rings, Gap-Rings, & Segments:

- Rings commonly used for distributor assemblies and coil assemblies
- Gap-Rings are used when a 'snap' fit is desired for the braze preform placement
- Segments are ideal for minimum quantity braze alloy needs, or when space constraints do not permit full ring
- Rings typically used on or in tube, pipe, and rod assemblies



Multiple Turn Rings:

- Beneficial when additional braze alloy is required
- Used when space constraints do not permit larger diameter wire
- Does not need to be full coil turns (i.e. can be 2.5 turns, etc.)



Bulk Brazing Alloys:

- Wire: Various diameters and packaging options
- Strip: Various widths and thicknesses
- Paste & Powder: Various binders and packaging options (w/ or w/o flux)
- Rod & Cut Lengths: Various diameters and lengths



Johnson Manufacturing Fluxes:

- SS White Flux: Good general purpose low temperature flux
- PowerBraz: Effective powdered flux for use on red metals and steels
- Johnson Aluminum Flux: Temperature range is perfectly matched to 4047 applications
- Buffalo Flux 2805: Excellent flux for CAB furnace aluminum brazing
- KwikFlux 54: General purpose, widely used for low temp alloys
- Flux Remover: Removes flux residue, rust, mill & heat scale

Common alloys for brazing HVAC/R and plumbing components (others available as well)

Alloy	Composition	Solidus / Liquidus	Description
BCuP-2	0Ag / 92.75Cu / 7.25P	1310°F / 1350°F	Economical and very fluid, medium temp alloy for use on copper, brass, & bronze; fast flow & self fluxing on copper
BCuP-3	5Ag / 89Cu / 6P	1190°F / 1325°F	Slightly more costly than BCuP-2; Slower flow & ability to fill larger gaps; self fluxing on copper
BCuP-4	6Ag / 86.75Cu / 7.25P	1190°F / 1275°F	Good balance of Ag vs. temperature range for BCuP alloy; very fluid for tight joints; self fluxing on copper
BCuP-5	15Ag / 80Cu / 5P	1190°F / 1300°F	Slower flow for larger joint clearances; higher Ag and lower P allow improved ductility; better in vibration conditions
M18	18Ag / 75.75Cu / 6.25P	1190°F / 1220°F	Lowest liquidus of copper-phos alloys; good flow for tighter joints; better ductility like BCuP-5
BAISI-3 (4145)	85.65Al / 10Si / 4Cu / 0.22Zn / 0.15Mn	970°F / 1085°F	General purpose Al brazing alloy; used when limited flow is required; wider melting range than BAISI-4
BAISI-4 (4047)	86.45Al / 12Si / 0.8Fe / 0.3Cu / 0.22Zn / 0.15Mn / 0.1Mg	1070°F / 1080°F	Free flowing Al brazing alloy; good corrosion resistance; reduced shrinkage and hot cracking when brazed
BAG-1	45Ag / 15Cu / 16Zn / 24Cd	1125°F / 1145°F	Low temp high Ag alloy; good flow for tight joint clearances; great ductility but contains Cd
BAG-2	35Ag / 26Cu / 21Zn / 18Cd	1125°F / 1295°F	Similar to BAG-1 alloy, but less Ag raises flow temp; better for looser joints or large fillets; contains Cd
BAG-5	45Ag / 30Cu / 25Zn	1225°F / 1370°F	General use alloy for brazing brass and copper; higher braze temp than Cd containing alloys; Cd free
BAG-6	50Ag / 34Cu / 16Zn	1250°F / 1425°F	Similar to BAG-6 alloy, but slightly higher braze temp; Cd free
BAG-18	60Ag / 30Cu / 10Sn	1115°F / 1325°F	High Ag alloy used on heat exchangers that are exposed to salt water at higher temps; Zn free and Cd Free