



SOLDERING & BRAZING PRODUCTS



Stay-Brite® and Stay-Brite®8: Silver-bearing solders are often used instead of brazing alloys throughout the refrigeration/air conditioning industry. Both Stay-Brite® and Stay-Brite® 8 produce a component with greater overall strength than a brazed component whose base metals are weakened by annealment from high brazing heat. Stay-Brite® solders bond with all of the ferrous and nonferrous alloys. Joints soldered with Stay-Brite® solders exhibit considerably higher-than-necessary elongation for sound, dissimilar metal joints and vibration applications. Stay-Brite®8 is especially effective in filling loosely-fitted couplings.

Alloy	Melting Range		Specifications Certifications
	Solidus °F/°C	Liquidus °F/°C	
Stay-Brite®	430/221	430/221	Fed Spec QQ-S-571E, Class SN96; NSF 51; J-STD-006, Sn96Ag04A
Stay-Brite®8	430/221	535/279	NSF Certified to NSF Certified to NSF 51
Bridgit®	460/238	630/332	ASTM B32, HB; NSF Certified to ANSI/NSF 61
50/50	360/182	420/216	ASTM B32, Sn50; J-STD-006, Sn50Pb50A
95/5	452/233	464/240	ASTM B32, Sb5; J-STD-006, Sn95Sb05A



BRIDGIT* Bridgit® lead-free solder is widely used in plumbing applications where lead-bearing solders are prohibited. Contains nickel, making joints tremendously strong. Wide plastic range makes Bridgit® an excellent alloy for large diameter fittings and ill-fitted or non-concentric pipes. Fills gaps and caps off easily and effectively.



95/5: Tin/antimony solder well-suited for applications where moderately-elevated temperature is a factor. With higher electrical conductivity and high fluidity, 95/5 is recommended for lead-free installations of small diameter, tight-fitting connections. Not recommended for HVAC connections.

Stay-Silv® (white brazing flux): For use with silver brazing alloys on all metal other than aluminum, magnesium or titanium. Effective to 1600°F. Meets Fed. Spec. OF499, Type B; AWS A5.32, Class FB3A; AMS 3410.

Stay-Silv® (black brazing flux): For use with silver or other brazing alloys with liquidus temperature below 1800°F. Recommended for stainless steel, heavy parts, and whenever heating cycle is prolonged. For all metals other than aluminum, magnesium or titanium. Meets AWS A5.32, Class FB3C; AMS 3411; Fed. Spec. O-F-499D, Type B.



(brazing flux): Auto-dispense flux for brazing copper, brass, mild and stainless steel, and other ferrous and nonferrous alloys. Wide active range, long shelf life, uniform dispensing and excellent joint penetration. Comes with an easy-to-use brush cap that delivers accuracy in application, elimination of wasted flux, longer protection for brazed parts and versatility in use. Meets AWS 5.31.



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SAFETY-SILV®



Alloy	Silver %	Copper %	Zinc %	Tin %	Melting Range		Specifications
					Solidus °F/°C	Liquidus °F/°C	AWS A5.8
Safety-Silv®25	25	43	30	2	1270/688	1435/779	
Safety-Silv®35	35	32	33	—	1250/677	1350/732	BAG-35
Safety-Silv®38T	38	32	28	2	1220/660	1325/718	BAG-34
Safety-Silv®40	40	30.5	29.5	—	1250/677	1350/732	—
Safety-Silv®40T	40	30	28	2	1220/660	1310/710	BAG-28
Safety-Silv®45	45	30	25	—	1225/663	1370/743	BAG-5
Safety-Silv®45T	45	27	25	3	1195/646	1265/685	BAG-36
Safety-Silv®56	56	22	17	5	1145/618	1205/652	BAG-7

Dynaflow® is an exceptionally pure, phos/copper/silver brazing alloy recommended for all copper-to-copper and copper-to-brass cooling applications. Harris invented Dynaflow® years ago as an economical alternative to 15% silver alloys, and through the years, the serviceability and economic benefits of Dynaflow® have made it a familiar and standard replacement for 15% in the HVAC/R industry. Dynaflow® is a premium, medium-range silver alloy, formulated to even tighter specifications than the Stay-Silv® alloys to mirror the performance characteristics of the 15% silver brazing filler metals. Excellent for brazing both tight and poorly-fitted connections, Dynaflow's proven reliability and acceptance by field service engineers have made it the leading choice of brazing operators.



Harris O: Low-cost alloy for many copper-to-copper applications where moderate fit-up can be maintained and brazing temperature is not critical.

Stay-Silv® 5 and Stay-Silv® 6: Medium-range alloys Stay-Silv® 5 is useful primarily where fit-up cannot be tightly controlled. Stay-Silv® 6 is slightly more fluid and can be used where closer tolerances are available. Both alloys are somewhat more ductile than Harris O.

Stay-Silv® 15: For many years, this alloy was the industry standard for air conditioning/refrigeration applications. Now, 15% is often replaced by Dynaflow® in many AC/R applications.

Low Fuming Bronze (Welco 15): A braze-welding alloy used to braze steel, steel alloys, and cast iron. LFB is frequently used to braze steel brackets, straps, angles and related fittings. Rod is deposited by melting it along the length of the joint. This alloy requires wider joint gaps, fillets, or vee-grooved butt joints for best results.

Alloy	Silver %	Phos %	Melting Range			Specifications			Recommended Joint Clearance
			Solidus °F/°C	Liquidus °F/°C	Fluidity Rating*	AWS A5.8	BS 1845	DIN 8513	
Flash	0	8.1	1310/710	1340/727	8	—	—	—	.002/.004"
Harris O	0	7.1	1310/710	1475/802	5	BCuP-2	—	L-CuP7	.002/.007"
Stay-Silv®2	2	7.0	1190/643	1450/788	4	BCuP-6	CP2	—	.002/.005"
Stay-Silv®5	5	6.0	1190/643	1500/816	3	BCuP-3	CP4	—	.002/.006"
Stay-Silv®6	6	6.5	1190/643	1425/774	5	—	—	—	.002/.005"
Dynaflow®	6	6.1	1190/643	1465/796	3	—	—	—	.002/.006"
Stay-Silv®15	15	5.0	1190/643	1480/804	3	BCuP-5	CP1	—	.002/.006"