

# Filler Metals Chart

Harris Products Group	QQ-B-654A	AMS	AWS A5.8	Ag	Cu	Zn	Ni	Sn	Other	SOLIDUS		LIQUIDUS		
										°F	°C	°F	°C	
Safety-Silv® 25				25	43	30		2		1270	688	1435	779	
Safety-Silv® 30	BAG-20		BAG-20	30	38	32				1250	677	1410	766	
Safety-Silv® 35			BAG-35	35	32	33				1250	677	1350	732	
Safety-Silv® 38T			BAG-34	38	32	28		2		1220	660	1325	718	
Safety-Silv® 40				40	30.5	29.5				1250	660	1350	732	
Safety-Silv® 40Ni2	BAG-4		BAG-4	40	30	28	2			1220	677	1435	779	
Safety-Silv® 40T			BAG-28	40	30	28		2		1220	660	1310	710	
Safety-Silv® 45	BAG-5		BAG-5	45	30	25				1225	663	1370	743	
Safety-Silv® 45T			BAG-36	50	27	25		3		1195	646	1265	685	
Safety-Silv® 50			BAG-6	50	34	16				1270	688	1425	774	
Safety-Silv® 50N		4788	BAG-24	50	20	28	2			1220	660	1305	707	
Safety-Silv® 56	BAG-7	4763	BAG-7	56	22	17		5		1145	618	1205	652	
Flash™					91.9				8.1P	1310	710	1340	727	
Dynaflow®				6	87.9				6.1P	1190	643	1465	796	
Harris 0			BCuP-2		92.9				7.1P	1310	710	1475	802	
Harris 0LP					93.2				6.8P	1310	710	1510	821	
Harris 0HP			BCuP-2		92.6				7.4P	1310	710	1445	785	
Harris 0XHP					92.4				7.6P	1310	710	1415	768	
Stay-Silv® 2			BCuP-6	2	91.0				7.0P	1190	643	1450	788	
Stay-Silv® 2LP				2	91.4				6.6P	1190	643	1500	816	
Stay-Silv® 2HP				2	90.6				7.4P	1190	643	1405	763	
Stay-Silv® 5			BCuP-3	5	89.0				6.0P	1190	643	1500	816	
Stay-Silv® 5LP				5	89.3				5.7P	1190	643	1535	835	
Stay-Silv® 5HP				5	88.6				6.4P	1190	643	1445	785	
Stay-Silv® 6				6	87.5				6.5P	1190	643	1425	774	
Stay-Silv® 6LP				6	87.8				6.2P	1190	643	1455	791	
Stay-Silv® 6HP			BCuP-4	6	86.8				7.2P	1190	643	1335	724	
Stay-Silv® 15	BCuP-5		BCuP-5	15	80.0				5.0P	1190	643	1480	804	
Blockade®			BCuP-9		Rem			6.5	6.5PSi	1178	637	1247	674	
Stay-Brite®				4				96		430	221	430	221	
Stay-Brite® 8				6				94		430	221	535	279	
Bridgit®										460	238	630	332	
Alsolder™ 500						15		85		391	199	482	250	
Al-braze™ 1070			BAISi4							1070	577	1080	582	
Ag Clad 40Ni2*			BAG-4											

\* Alloy on both sides of copper shim.

\*\* The higher the fluidity rating, the faster the alloy flows within the melting range.



	Fluidity Rating**	Typical Application
	5	For steel to copper alloys. Moderate ductility. For dissimilar metals joint should be in compression on cooling.
	6	Use with ferrous and nonferrous base metals. Flow suitable for bridging gaps.
	5	Ferrous and nonferrous base metals. Moderate temperature and good ductility.
	7	Low-temperature, free-flowing alloy with exceptional fillet-forming quality. For ferrous and nonferrous metals.
	5	For steel, nickel, and copper alloys. Suitable for wider clearance yet provides good ductility.
	4.5	For stainless steel, nickel alloys for corrosion resistance and strength. Good choice for tungsten carbides.
	6.5	Good flow properties. Suitable for ferrous and nonferrous base metals.
	6.5	General purpose filler for steel and copper alloys. Melting range useful for wide clearances.
	7	Good flow properties. Suitable for ferrous and nonferrous base metals.
	5.5	Often used to braze galvanized steel but suitable for bridging gaps in other ferrous and non ferrous metals.
	7	For stainless steel applications to prevent crevice corrosion.
	8	For ferrous and nonferrous alloys. Often used to braze stainless steel for food service. NSF 51 listed.
	8	For copper. Very fluid for close joint tolerances .002-.004".
	3	Premium alloy for copper or brass. Excellent strength and ductility, use as replacement for 15.
	5	For copper. Requires medium fit-up, .002-.007" clearance.
	4	For copper. Flow is more sluggish, fit-up should provide .003-.010" clearance.
	6	For copper. Fluid alloy, requires good fit-up, .002-.004" clearance.
	7	Very fluid. Fit-up .001-.003".
	4	Broadens melting range of 0. For copper or brass. Clearance range .002-.005".
	3	Sluggish flow, used for copper joints with wider clearance .003-.006".
	5	For copper. More fluid, clearance .002-.005".
	3	For copper or brass. Used to bridge gaps where close fit-up can't be maintained.
	2	For copper. Used where fit-up can't be controlled, clearance .003-.006".
	4	For copper or brass. Slightly more fluid, use with clearance of .003-.005".
	5	For copper or brass. Medium range alloy for applications with clearances or .002-.005".
	4	For copper or brass. For bridging gaps where more ductile filler metal is required.
	7	For copper or brass. Fluid alloy for controlled clearance .001-.004". Good for automated brazing. NSF61
	3	For copper or brass. Useful for wide clearance.002-.006". Good ductility.
		For copper or brass. Lower brazing temperature, excellent replacement for many silver bearing BCuP alloys.
	10	Low-temperature solder for all metals except aluminum. Used in refrigeration joints. NSF 51 listed.
	8	Similar to Stay-Brite®. Plastic range useful in bridging wider gaps. Certified to NSF 51 listed.
	6	Lead-free, nickel & silver-bearing solder of exceptional strength & capping ability. NSF 61 listed.
		A low temperature solder for aluminum and copper.
		For brazing aluminum base metals.
		A clad strip (alloy-copper-alloy) in a 1-2-1 ratio. Used for carbide brazing.

WARNING Protect yourself and others. Read and understand this information.

BRAZING AND SOLDERING ALLOYS AND FLUXES MAY PRODUCE FUMES AND GASES HAZARDOUS TO YOUR HEALTH.

• Before use, read and understand the manufacture's instructions, Material safety data sheets (MSDS) and your employer's safety practices. • Keep you head out of the fumes. • Use enough ventilation, exhaust at the flame or both, to keep fumes and gases form your breathing zone and the general area. • For maximum safety, be certified for and wear a respirator at all times when welding or brazing. • Wear correct eye, ear and body protection. • Do not touch live electrical parts. • See American national standard X49.1, Safety in welding, cutting and allied processes, published by the american welding society, 500 N.W. LeJeune Road, Miami Florida 33126; OSHA Safety and Health Standards, 29 CFR 1910, Available form the U.S. Government printing office, Washington, D.C. 20402. • Material safety data sheets are available for all Harris products. MSDS contain detailed safety and health information about possible hazards associated with use of these products. MSDS are available from your employer or by contacting the Harris Products Group, Mason, OH 45040.