



# HARRIS FILLER METAL SELECTION CHART

METALS TO BE JOINED	FILLER METALS		MELTING RANGE			FLUXES	TORCHES & FLAMES**
	SOLDERS	BRAZING FILLER METALS	SOLIDUS °F / °C	LIQUIDUS °F / °C	FLUIDITY RATING*		
Copper or Brass To Copper or Brass	Stay-Brite®		430 / 221	430 / 221	10	Stay-Clean® Soldering Fluxes Bridg® Water Soluble Paste Flux No flux required for copper-to-copper joints with the phosphorus-bearing filler metals For brass and other alloys of copper, use Stay-Silv® White Brazing Flux	Harris Powerform® Air - Fuel Equipment Harris Powerform® Air - Fuel Equipment Harris Powerform® or Classic Dry-Acetylene Equipment (neutral flame)
	Stay-Brite® 8		430 / 221	535 / 279	8		
	Bridg®		460 / 238	630 / 332	6		
	Blockade®		1178 / 637	1247 / 674	7		
	Harris O		1310 / 710	1475 / 802	5		
	Stay-Silv® 5		1180 / 643	1500 / 816	3		
Copper or Brass To Steel or Stainless	Stay-Brite®		430 / 221	430 / 221	10	Stay-Clean® Soldering Flux Stay-Silv® White Brazing Flux Stay-Silv® Black Flux for Stainless	Harris Powerform® Air - Fuel Equipment Harris Powerform® or Classic Dry-Acetylene Equipment (slightly reducing flame)
	Stay-Brite® 8		430 / 221	535 / 279	8		
	Safety-Silv® 66		1145 / 618	1265 / 685	6		
	Safety-Silv® 40		1200 / 657	1320 / 723	5		
	Safety-Silv® 45		1225 / 663	1370 / 743	6.5		
	Safety-Silv® 45T		1195 / 646	1265 / 685	7		
Steel or Stainless To Steel or Stainless	Stay-Brite®		430 / 221	430 / 221	10	Stay-Clean® Soldering Flux Stay-Silv® White Brazing Flux Stay-Silv® Black Flux for Stainless	Harris Powerform® Air - Fuel Equipment Harris Powerform® or Classic Dry-Acetylene Equipment (slightly reducing flame)
	Stay-Brite® 8		430 / 221	535 / 279	8		
	Safety-Silv® 66		1145 / 618	1265 / 685	6		
	Safety-Silv® 40		1200 / 657	1320 / 723	5		
	Safety-Silv® 40N2		1220 / 660	1435 / 779	4.5		
	Safety-Silv® 45		1225 / 663	1370 / 743	6.5		
Steel or Stainless To Carbides	NOT RECOMMENDED					Stay-Silv® White Brazing Flux	Harris Powerform® or Classic Dry-Acetylene Equipment (reducing flame)
		Safety-Silv® 40N2	1220 / 660	1435 / 779	4.5		
		Safety-Silv® 50N	1220 / 660	1305 / 707	7		
Aluminum To Aluminum (1) Aluminum To Copper Or Brass (2)* Aluminum To Steel Or Stainless (3)*	Altother® 500		591 / 199	482 / 250	NOT RATED	Stay-Clean® Aluminum Soldering Flux No flux required	Harris Powerform® Air - Fuel Equipment Harris Powerform® Air - Fuel Equipment
	Alocor®			824 / 440	NOT RATED		
		Abraze® 1070	1070 / 577	1060 / 582	NOT RATED		
		(1) Can be directly brazed or soldered. (2) Solder directly with Altother® 500, or coat steel side with aluminum and solder with Alocor® or Braze with Abraze® 1070				Abraze® 1070 Flux	Harris Powerform® Air - Fuel Equipment or Classic Dry-Acetylene Equipment (reducing flame)

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

\*\* For best results and strong leak proof bonds, filler metals should be applied to the joint area only after the parts are heated to the proper brazing or soldering temperature. Dry-Acetylene torches may be substituted for air-fuel but may require care to prevent overheating of the base metal/flux with the higher temperature flame.

Safety Information: WARNING: PROTECT yourself and others. Read and understand this information. FUMES AND GASES can be hazardous to your health. HEAT RAYS (INFRARED RADIATION) from flame or hot metal can injure eyes. Before use, read and understand the manufacturer's instructions, Material Safety Data Sheet (MSDS) and your employer's safety practices. Keep your head out of fumes. Use enough ventilation, exhaust at the flame, or both, to keep fumes and gases from your breathing zone and the general area. Wear correct eye, ear and body protection. See American National Standard Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, Florida 33126; OSHA Safety Standards, available from the U.S. Government Office, Washington, DC 20402. STATEMENT OF LIABILITY - DISCLAIMER Any suggestion of product applications or results is given without representation or warranty, other expressed or implied. Without exception or limitation, there are no warranties of merchantability or of fitness for particular purpose or application. The user must fully evaluate every process and application in all aspects, including suitability, compliance with applicable law and non-infringement of the rights of others. The Harris Products Group and its affiliates shall have no liability in respect thereof.