

FILLER METALS SELECTION CHART

METALS TO BE JOINED	SOLDERS	BRAZING FILLER METALS	SOLIDUS	LIQUIDUS	FLUIDITY RATING*	FLUX	TORCHES & FLAMES
COPPER OR BRASS TO	Stay-Brite® Stay-Brite® 8 Bridgit®		430°F / 221°C 430°F / 221°C 460°F / 238°C	430°F / 221°C 535°F / 279°C 630°F / 332°C	10 8 6	Stay-Clean® soldering fluxes, liquid or paste. Bridgit® paste or water soluble paste flux.	Harris Inferno® Air-fuel equipment
		Blockade® Harris® 0 Stay-Silv® 5 Dynaflow® Stay-Silv® 6 Stay-Silv® 15	1178°F / 637°C 1310°F / 710°C 1190°F / 643°C 1190°F / 643°C 1190°F / 643°C 1190°F / 643°C	1247°F / 674°C 1475°F / 802°C 1500°F / 816°C 1465°F / 796°C 1425°F / 774°C 1480°F / 804°C	7 5 3 3 5 3	No flux required for copper to copper joints with the phosphorus-bearing filler metals. For brass and other copper alloys, use Stay-Silv® white brazing flux.	Harris Inferno® Air-fuel equipment or Harris oxy-acetylene equipment (Neutral flame)
COPPER OR BRASS TO	Stay-Brite® Stay-Brite® 8		430°F / 221°C 430°F / 221°C	430°F / 221°C 535°F / 279°C	10 8	Stay-Clean® liquid soldering flux.	Harris Inferno® Air-fuel equipment
	STEEL OR STAINLESS STEEL	Safety-Silv® 56 Safety-Silv® 38T Safety-Silv® 45 Safety-Silv® 45T	1145°F / 618°C 1120°F / 660°C 1125°F / 663°C 1195°F / 646°C	1205°F / 652°C 1325°F / 718°C 1370°F / 743°C 1265°F / 685°C	8 7 6.5 7	Stay-Silv® white brazing flux. Stay-Silv® black flux for stainless steel.	Harris Inferno® Air-fuel equipment or Harris oxy-acetylene equipment (Slightly reducing flame)
STEEL OR STAINLESS STEEL TO	Stay-Brite® Stay-Brite®		430°F / 221°C 430°F / 221°C	430°F / 221°C 535°F / 279°C	10 8	Stay-Clean® liquid soldering flux.	Harris Inferno® Air-fuel equipment
	STEEL OR STAINLESS STEEL	Safety-Silv® 56 Safety-Silv® 38T Safety-Silv® 40Ni2 Safety-Silv® 45 Safety-Silv® 45T Safety-Silv® 50N	1145°F / 618°C 1220°F / 660°C 1220°F / 660°C 1225°F / 663°C 1195°F / 646°C 1220°F / 660°C	1205°F / 652°C 1325°F / 718°C 1435°F / 779°C 1370°F / 743°C 1265°F / 685°C 1305°F / 707°C	8 7 4.5 6.5 7 7	Stay-Silv® white brazing flux. Stay-Silv® black flux for stainless steel.	Harris Inferno® Air-fuel equipment or Harris oxy-acetylene equipment (Slightly reducing flame)
STEEL OR STAINLESS STEEL TO CARBIDES	Not Recommended	Safety-Silv® 40Ni2 Safety-Silv® 50N	1220°F / 660°C 1220°F / 660°C	1435°F / 779°C 1305°F / 707°C	4.5 7	Stay-Silv® black flux for stainless steel.	Harris oxy-acetylene equipment (Reducing flame)
ALUMINUM-TO-ALUMINUM (1) OR ALUMINUM-TO-COPPER OR BRASS (2) OR ALUMINUM-TO-STEEL OR STAINLESS STEEL (2)	Al-Solder® 500 Alcor®		391°F / 199°C ---	482°F / 250°C 824°F / 440°C	---- ----	Stay-Clean® aluminum soldering flux. Flux is contained inside the wire.	Harris Inferno® Air-fuel equipment
		Al-Braze® 4043 Al-Braze® 1070	1065°F / 574°C 1070°F / 577°C	1170°F / 632°C 1080°F / 582°C	7 9	Al-Braze® 1070 flux	Harris Inferno® Air-fuel equipment or Harris Oxy-acetylene equipment (Reducing flame)

NOTE: ALUMINUM TO DISSIMILAR METAL JOINTS MAY BE SUBJECT TO GALVANIC CORROSION

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