

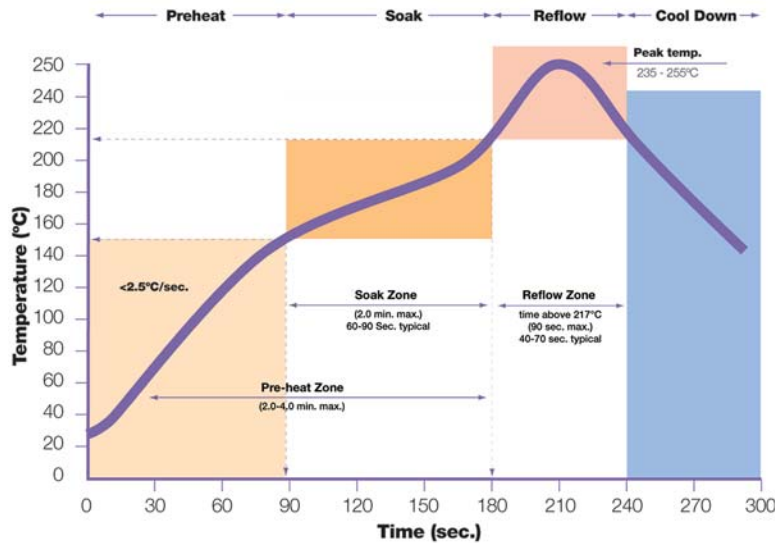
**Table 1
Metal Solderability Chart**

Category	If trying to solder to this metal surface:	Solder Paste and Tacky Soldering Fluxes	Liquid Fluxes and Flux-Pen® Formulas	Cored Wire
1	Platinum, Gold, Copper, Tin, Solder, Silver	All products can solder these metal surfaces.	All products can solder these metal surfaces.	All products can solder these metal surfaces.
2	Nickel, Cadmium, Brass, Lead, Bronze, Rhodium, Beryllium Copper, Palladium, Immersion Tin, Immersion Silver	EnviroMark™ 907, EnviroMark™ 808 Easy Profile® 256 & 256HA HydroMark 531, TSF 6592, TSF 6800 Series	186, 1544, 2120, 2331-ZX, 2235, 2224-25, 2222, 2220-VF	44, 48, 331, OR-421
3	Nickel-Iron, Kovar	Base metal must be plated.	2222, 2220-VF	48, 331, OR-421
4	Zinc, Mild Steel, Chromium, Inconel, Monel, Stainless Steel	Base metal must be plated.	Call Kester's Customer Service Department	48

EXAMPLE 1: When soldering Beryllium Copper to Tin, you could use any of the products listed in Category 2, 3, or 4 since Beryllium Copper requires more active products than Tin.

EXAMPLE 2: If you were soldering Solder coated leads to a Copper surface, you could use any of Kester's products (Category 1, 2, 3, or 4).

STANDARD SOLDER PASTE REFLOW PROFILE FOR KESTER PASTE CONTAINING ALLOYS: Sn96.5Ag3.0Cu0.5 or Sn96.5Ag3.5



Stage 1- Preheat Zone (Rapid Heating Stage)

The purpose of this zone is to quickly bring the assembly up to a temperature where solder paste can become highly chemically active.

Stage 2- Soak Zone (Temperature Equalization Stage)

The purpose of this stage is for the thermal mass of the assembly to reach a uniform temperature plateau so that there is a very small differential between the hottest and coldest soldering locations on the assembly.

Stage 3- Reflow Zone (Rapid Heating and Cooling)

The purpose of this stage is to rapidly heat the assembly above the melting (liquidus) temperature of the solder and subsequently cool the assembly down quickly to solidify the solder. Wetting of solder onto substrates occurs in the reflow zone.

WEIGHTS AND MEASURES COMMON CONVERSIONS

To Change	To	Multiply By:
Gallons (US)	Liters	3.7853
Quarts (liquid)	Liters	0.9463
Pounds (avdp.)	Grams	453.592
Pounds (avdp.)	Kilograms	0.4536
Pounds (avdp.)	Ounce (troy)	14.5833
Ounces (avdp.)	Grams	28.3495
Celsius = 5/9 (F-32)		Fahrenheit = 9/5 (C) + 32

FORMULA FOR ADDING TIN TO TIN-LEAD SOLDER POTS

Tin can be added to solder to replace tin lost by oxidation. The pot temperature should be at least 460°F. Tin bars should be added slowly and the solder should be mixed well.

$$T = \frac{W(A - B)}{(100 - A)}$$

EXAMPLE

$$\frac{900(63 - 61.6)}{(100 - 63)} = \frac{1260}{37} = 34 \text{ lbs. of Tin to add}$$

T = Pounds of Tin to add W = Pounds of solder on pot
 A = Percentage of Tin desired B = Percentage of Tin in pot

Please visit www.kester.com and click on Lead-Free Solutions™ for a worksheet to balance Lead-Free alloy systems.