



Choosing the right soldering materials for your selective soldering process can be challenging!

Alpha just made the job much easier for you.



alpha

alpha® 

# Selective Soldering Applications Are Increasing Industry-wide.

There has been a rapid increase in the use of selective soldering equipment for PCB assembly over the past several years. This is primarily due to the decrease in the number of through hole devices designed into boards along with the reduced equipment investment required. Because the selective soldering process is so much different than wave soldering, Alpha performed a comprehensive study designed to help our customers identify which of our leading liquid fluxes perform best under different selective soldering conditions. We also identified the specific condition where each flux performed at its best. Simply follow Steps 1 and 2 below to determine which ALPHA® flux best meets your process requirements.

## Step 1

Using the following tables (below and top right), identify the conditions that most closely represent your selective soldering process and find the ALPHA® flux(es) that would fit your needs.

**Note:** Table 1 is for 1.6 mm (0.062") boards, and Table 2 is for 2.4mm (0.93") boards.

Settings required to achieve >75% fill on 100% of holes

**Table 1 – 1.6mm Board**

	FLUX	PROCESS GUIDELINES	FLUX	PROCESS GUIDELINES	FLUX	PROCESS GUIDELINES
5	EF2210	FS310, PH70	EF5601	FS190-250, PH70-130	EF2210	FS190, PH70-130
	EF6000	FS190-310, PH70-130	EF6000	FS190-310, PH70-130	EF5601	FS190-310, PH70-130
	EF6100	FS310, PH70	EF6100	FS190-310, PH70-130	EF6000	FS190-310, PH70-130
	EF6103	FS190-310, PH70-130	EF6103	FS190-310, PH70-130	EF6100	FS190-310, PH70-130
	EF8000	FS310, PH70-130	EF6850HF	FS310, PH70	EF6103	FS190-310, PH70-130
3.5			EF8000	FS310, PH70-130	EF6850HF	FS190-310, PH70-130
			EF9301	FS190, PH130, or; FS310, PH70	EF8000	FS190-310, PH70-130
	EF2210	FS310, PH70	EF2210	FS310, PH70	EF9301	FS190-310, PH70-130
	EF6000	FS310, PH70-130	EF6000	FS190-310, PH70-130	EF2210	FS190, PH130
	EF6103	FS310, PH70-130	EF6100	FS310, PH70-130	EF5601	FS190-250, PH110-130
2	EF8000	FS310, PH70	EF6103	FS190-310, PH70-130	EF6000	FS190-310, PH70-130
			EF8000	FS310, PH70-130	EF6100	FS190-310, PH70-130
	EF2210	FS310, PH70	EF2210	FS310, PH70	EF6103	FS190-250, PH100-130
	EF6000	FS310, PH70-130	EF6000	FS310, PH70-130	EF6850HF	FS190-310, PH70-130
	EF6103	FS310, PH70-130	EF6103	FS310, PH70-130	EF8000	FS190-310, PH70-130
				EF9301	FS310, PH70-100	
				EF6000	FS190-310, PH70-130	
				EF6100	FS190, PH130, or; FS310, PH70	
				EF6103	FS190, PH130	
				EF6850HF	FS190, PH70-130	
				EF8000	FS310, PH70	
	280		295		310	

### LEGEND

FS = Flux Solids, µg/cm<sup>2</sup>

PH = Pre-Heat, °C

Green Numbers = Optimum Settings

Solder Pot Temperature, °C

These are general guidelines which have proven to yield excellent results; however, depending upon your equipment, components, and circuit boards, your optimal settings may be different.



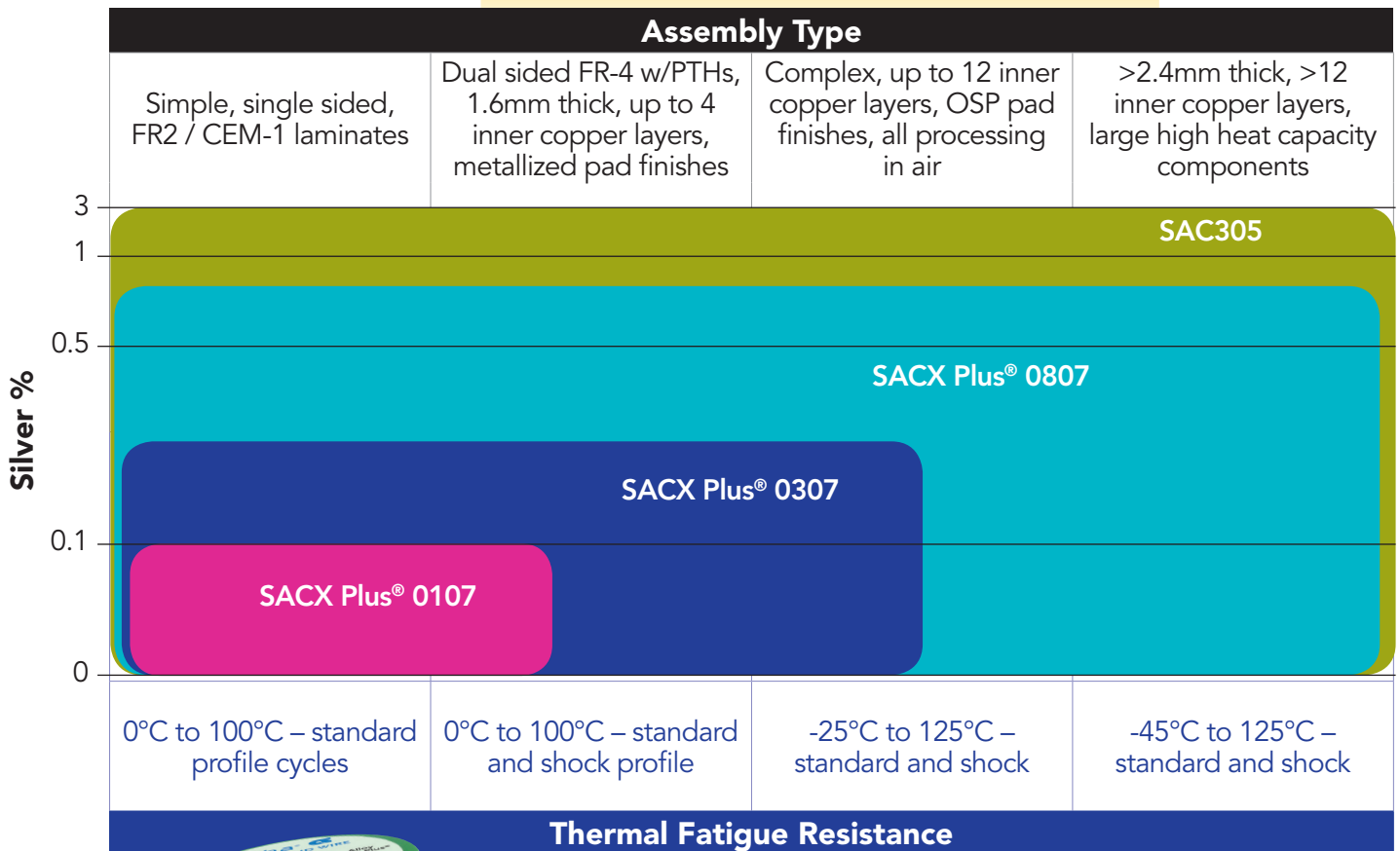
# ALPHA® SACX Plus® Alloys

ALPHA® SACX Plus® alloys are ideal for use in selective soldering applications. They are engineered to provide excellent solderability with minimal dross, and they also resist copper dissolution in processes requiring long, high temperature contact times.

Select the right ALPHA® SACX Plus® alloy for your board type using the chart below. You should also consider your mechanical reliability requirements.



## Technology Enabling Alloys



All our ALPHA® SACX Plus® alloys are available in a wide variety of diameters in solid wire form for use as a replenishment alloy in most selective soldering machines.

[www.alpha.alent.com](http://www.alpha.alent.com)

Worldwide/Americas Headquarters  
109 Corporate Boulevard  
South Plainfield, NJ 07080  
USA  
+1-814-946-1611 – Dial 0

European Headquarters  
Forsyth Road  
Sheerwater  
Woking GU215RZ  
United Kingdom  
+44-1483-758-400

Asia-Pacific Headquarters  
8/F, Paul Y. Centre  
51 Hung To Road  
Kwun Tong  
Kowloon, Hong Kong  
+852-3190-3100

SM1157  
©2013 Alpha

alpha®