

# alpha-fry™

## Technical Data Sheet

SM1143-7

# Alpha-Fry™ EGP-120

Halogen Free, No-Clean Solder Paste

### DESCRIPTION

Alpha-Fry™ EGP-120 paste flux system has been designed for lead free and tin-lead applications. It is a No Clean, ROL0 formulation to offer the SMT process reliable solder joints for assembly of components on PCB. The product chemistry is compatible with SAC305(96.5%Sn/3.0%Ag/0.5%Cu) or SAC0307(99%Sn/0.3%Ag/0.7%Cu) or Tin-lead alloy such as Sn63Pb37(63%Sn/37%Pb) alloys. It has been formulated to provide good printing performance, tack holding power for components during pick and place process and optimized soldering attributes during reflow.

### TECHNICAL SPECIFICATION

Item	Specification
10 rpm Malcom Viscosity For: 1) 88.6%metal loading SAC305 (96.5%Sn/3.0%Ag/0.5%Cu) 2) 88.6%metal loading SAC0307 (99%Sn/0.3%Ag/0.7%Cu) 3) 90% metal loading Sn63Pb37 (63%Sn/37%Pb)	1) 1700 poise 2) 1600 poise 3) 1300 poise
Tack Force as per JIS	> 100 gf
Stencil Life	> 8-hr
Hot Slump as per JIS	Pass
Residue Color	Clear Light Amber
Solder Ball as Per JIS	Pass
Halogen Content	None intentionally added
Halide & Halogen Content	Halide & Halogen Free
JIS-Z-3197-1999-8.41 Copper Corrosion Test	Pass
SIR IPC J-STD 004B	Pass
JIS-Z-3197-1999 8.5.4 Electromigration	Pass
Shelf Life at 0 - 10°C. Thaw to reach room temperature before opening the lid for use	6 months
Available Packaging	500 gm jar

### APPLICATION

Printing*
- 0.21 – 0.36 kg/cm blade pressure - 50 – 100 mm per second speed - 1.5 – 2.0 cm diameter paste roll - 1 – 5 mm/sec separation speed (snap off) - 8 – 14mm lift height

\*On 0.10mm - 0.15 mm (4 - 6 mil) thick stencil for 0.4 - 0.5 mm (0.016" - 0.020") pitch

Reflow	
Lead Free (Fig 1)	Tin Lead (Fig 2)
- Dry Air or Nitrogen - Initial Ramp: 1 - 2°C per second. - Soak time at 155 - 175° C: 60 to 90 seconds - Time above Liquidus: 45 – 90 seconds - Peak temperature: 235 to 245°C - Cooling rate should be 3 - 7°C per second	- Dry Air or Nitrogen - Initial Ramp: 1 - 2°C per second. - Soak time at 140 - 160° C: 80 - 120 seconds - Time above Liquidus: 45 – 90 seconds - Peak temperature: 210 to 230°C - Cooling rate should be 2 - 5°C per second

NOTE: The processing guidelines recommended and typical reflow profiles presented were tested in the lab with acceptable performance. Optimization to each board application should still be carried out by users to ensure best results.

Fig 1. Typical Reflow Profile for Alpha-Fry™EGP-120  
SAC305 & SAC 0307

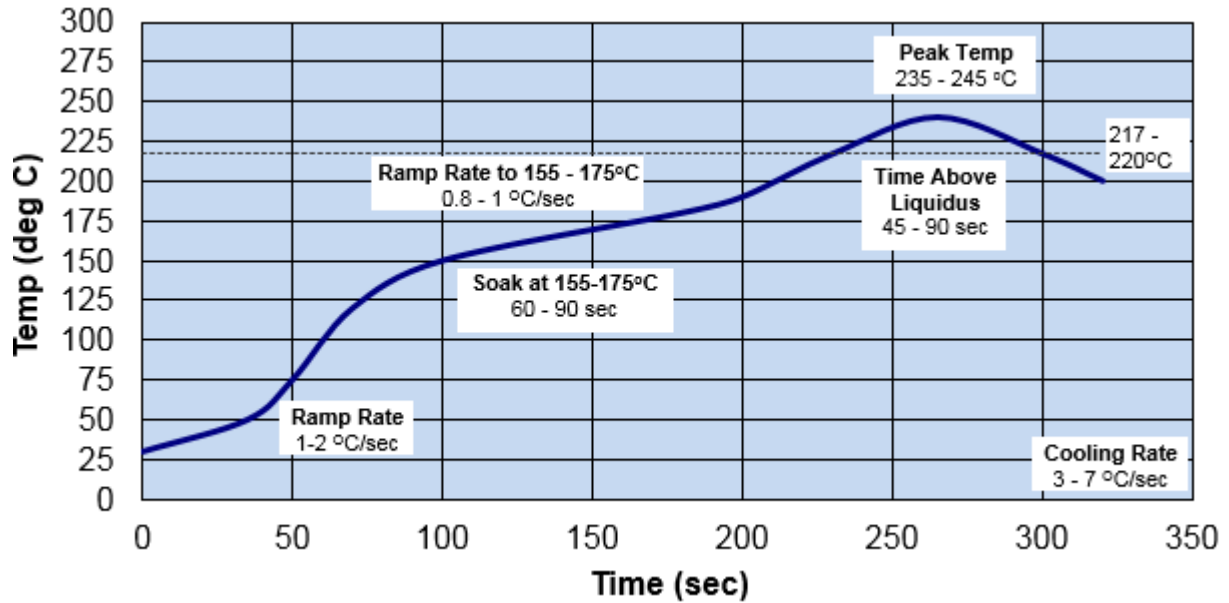
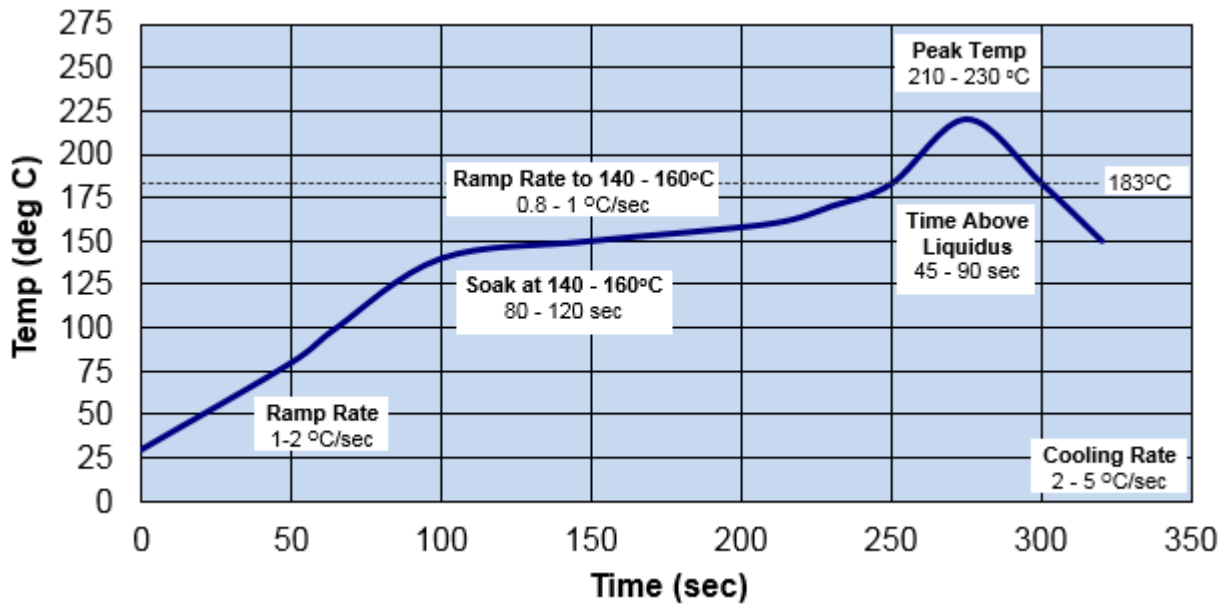


Fig 2. Typical Reflow Profile for Alpha-Fry™EGP-120  
Sn63Pb37



## HEALTH & SAFETY

Observe standard precautions for handling and use, such as well-ventilated areas and avoidance of prolonged or repeated contact with the skin. Suitable protective clothing should be worn to prevent the material from coming in contact with skin and eyes.

For more information, please refer to the Safety Data Sheet.