

EPOXY 4044

FEATURES

- Designed for Printing Applications
- One Part Epoxy
- Thermal Curing
- High Shear Strength
- Robust Handling Characteristics
- Compatible with High Speed Placement Equipment

DESCRIPTION

Epoxy 4044 is single part epoxy adhesive used for bonding SMT components to a PWB prior to double sided reflow or wave solder assembly. Epoxy 4044 is formulated to resist shear-thinning and has rapid thermal cure properties. The viscosity and surface tension of Epoxy 4044 provide the tack force needed for use with high speed placement equipment.

PHYSICAL PROPERTIES

Parameter	Value
Visual	Thick Liquid
Odor	Aromatic (slightly)
Color	Red
Viscosity	600-1,000 kcps
Specific Gravity	1.13 (water = 1) Typical
Boiling Point	>260°C

MECHANICAL PROPERTIES

Parameter	Value
Heat Deflection Temp	97°C Typical
Tensile Strength	11,500 psi Typical
Elongation %	4.6 Typical
Tensile Modulus	4.9 psi x 10 ⁵ Typical
Cured for 90 seconds	150°C Typical
Pull off - C1206	≈ 12 lbs Typical
5°shear strength - C1206	≈ 6 lbs Typical
Torque: IPC SM817 TM-650 2.4.42:	C-1206 bare FR4 (in.oz.) 11Typical

HANDLING & STORAGE

Parameter	Time	Temperature
Unrefrigerated Shelf Life	6 Months	Room Temperature

Do not refrigerate this product. Do not store near fire or flame. Keep away from sunlight as it may degrade product. Do not mix new and used adhesive in the same container. If the material should harden or crystallize it can be reheated to 40°C (104°F) for 8 hours to a useable condition.

APPLICATION

Epoxy 4044 is delivered ready to use, and is available in syringes, cartridges, and jars. When stencil printing, use a clean stencil and apply epoxy to stencil in ½” diameter bead. Bond strength will vary depending on component type, adhesive dot size, cure and type of solder mask.

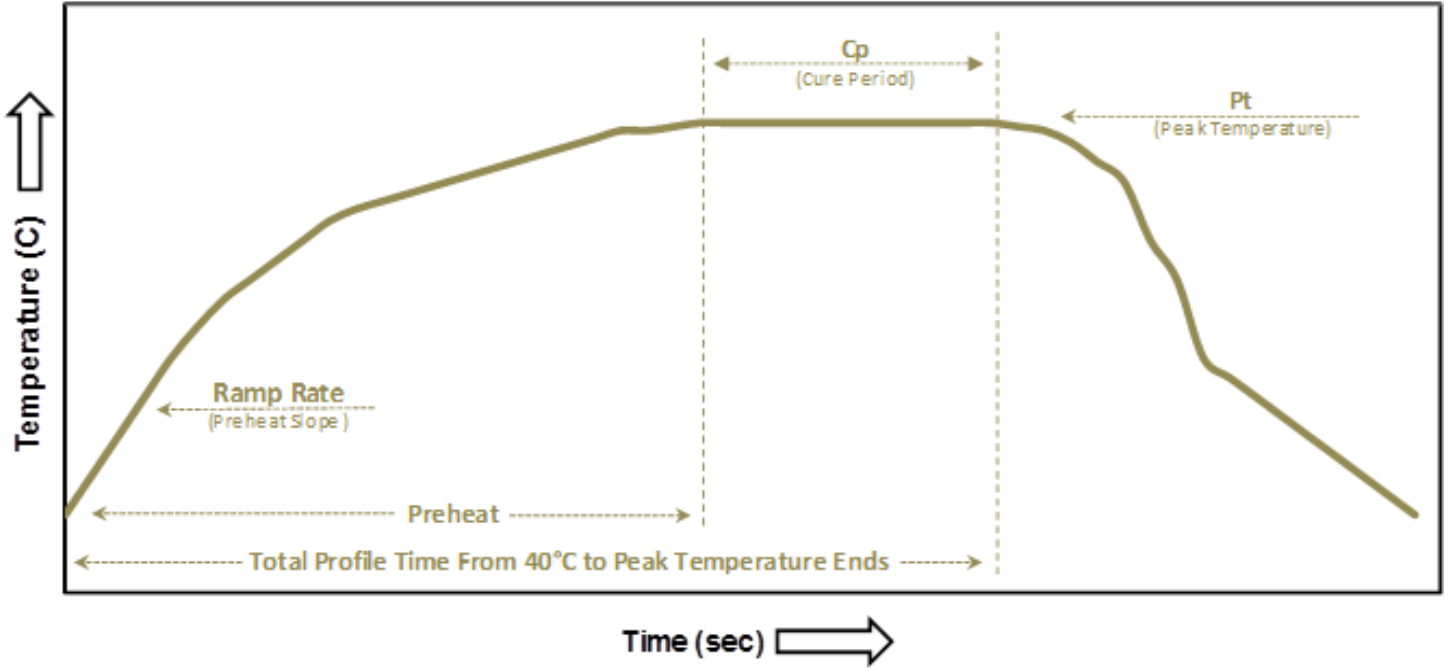
CLEANING

Uncured adhesive may be removed from the PCB with isopropyl alcohol. Cured epoxy or removal of bonded components can be accomplished with the application of heat at 120°C (250°F) which will soften Epoxy 4044 to aid removal.

SAFETY

Use with adequate ventilation and proper personal protective equipment. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers.

RECOMMENDED CURING PROFILE



Profile Feature	Parameter
Ramp up Rate	1°C-2.5°C/Second
Preheat from 40°C to 100°C	40-80 Seconds
Preheat from 100°C to 120°C	50-70 Seconds
Peak Temperature (Tp)	120°C-125°C
Time Above Peak	60 Seconds
Total Profile Time	2.5-3.5 Minutes

*Profiling information is provided as a guideline only. Your profile may differ due to process and material variables.