

NC27 – Tacky Flux

GENERAL DESCRIPTION

NC27 BGA FLUX GEL is a No Clean tacky dispensing flux ideally suited for BGA and surface mount component repairs. NC27 is formulated to give more activity versus the NC26. It leaves a clear colorless residue which does not require cleaning. This product is halide free. NC27 is designed for a wide range of temperature and humidity conditions with a stencil life greater than 8 hours.

KEY ADVANTAGES

- Stable product with long stencil life
- Excellent printing characteristics
- Suitable for dispensing, stencil printing, and pin transfer
- Excellent SMT rework flux offering bright shiny solder joints with clear probable residue
- Classified as ROL1 per J-STD-004

STORAGE AND HANDLING

Refrigeration is the recommended storage condition to maintain consistent viscosity, reflow characteristics and overall performance. Shelf life is 9 months from date of manufacture when handled properly.

STANDARD PRODUCT AVAILABILITY

UNIT OF MEASURE
10cc and 30cc Syringe
75cc and 150cc Jar

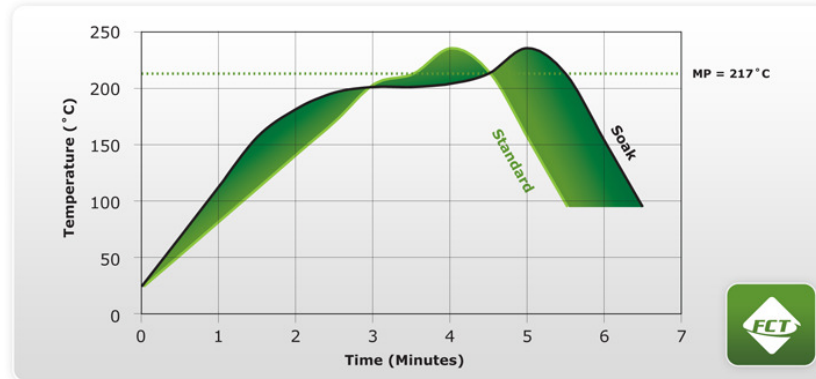
PHYSICAL PROPERTIES

Physical Properties	Values
Flux Type Classification	ROL1
Acid Number (mgKOH/gm)	135 – 150
Color	White/Cream
Copper Mirror	Low activity
Halide Content	0.00%
Silver Chromate	No halides
Fluoride Test	None detected
Solids Content	72 +/- 2%
Corrosion	Pass
SIR	Pass
Electromigration	Pass

MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheets (MSDS) are available online at www.fctassembly.com

A short 20-30 second soak below the melting point of the solder can be used to help minimize tombstoning.



RECOMMENDED REFLOW PROFILE

The recommendations apply to most lead free alloys in the SAC alloy system. This can be used as a general guideline in establishing a reflow profile when using **NC27**. Deviations from these recommendations are acceptable and may be necessary, based on specific process requirements including board size, thickness and other process characteristics. Please add 7-10C when using Sn100 based solder paste.

REFLOW

A peak temperature of 12-45 C above the melting point of the alloy is recommended for optimum results. A time above liquidus (TAL) of 30 to 90 seconds should also be used. Excessive temperature or excessive TAL may result in excessive Intermetallic Compound (SnCu-IMC) formation, which can adversely affect solder joint and long term reliability.

HEATING

A linear ramp of 0.5 to 2 C/sec is suggested to gradually remove the solvents and other volatile components in the solder paste. This also helps in minimizing solder balls, beading and bridging from hot slump.

A linear ramp also helps minimize depletion of flux activity which can happen at extended times above the liquidus (TAL) and at very high reflow temperatures.

A profile with a soak between 200-210C for less than 20 seconds can be used to reduce void formation on BGA and CSP devices.

APPLICATIONS AND METHODS

NC27 Tacky Flux is designed for stencil printing, pin transfer, dot dispensing and syringe applications. This flux can be used as a tack and flux vehicle for soldering components to a solid solder deposit, or precision pad technology board surface. It also is designed for rework applications on all PCB surface finishes. NC27 Tacky Flux can be used in BGA sphere attachment or for repair and reballing. It can also be used on flip chip, chip scale package and flip chip bumping site assemblies as a soldering flux.

CLEANING

NC27 is a no clean chemistry thus the residues don not need to be removed. If residue removal is required we suggest the following Kyzen products:

Cleaning Agent	Wash Concentration
Aquanox A4241	15-20%
Aquanox A4520	15-20%
Aquanox A4625	15-20%
Aquanox A4633	10%