NC266-3

Solder plus Support

HALOGEN FREE

No Clean Liquid Flux

Features:

- Rosin and Resin Free
- Very Good Wetting
- Halide-Free
- Lead-Free and Tin-Lead Compatible

Description:

NC266-3 is a rosin-free, resin-free, halide-free, no-clean wave solder flux designed to enhance wetting and prevent bridging during the wave soldering process. NC266-3 offers an enhanced activity level, as well as lower surface tension than other no-clean flux chemistries. NC266-3 performs well with bare copper, solder coated and organic coated PWBs, leaving negligible post-process residues that are non-conductive and do not require cleaning. NC266-3 may be utilized with tin-lead and lead-free solder alloys.

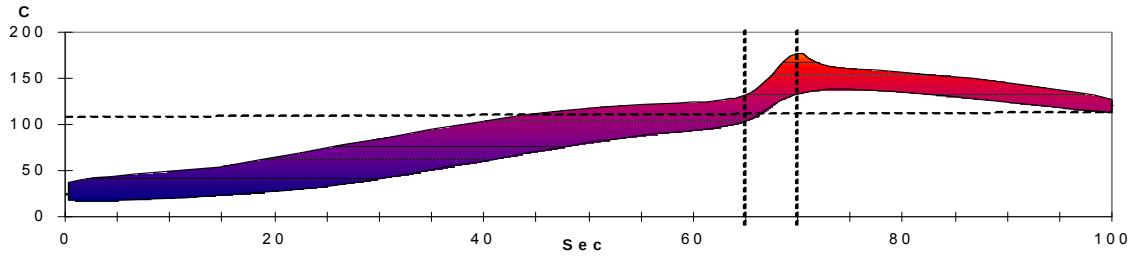
Application:

- NC266-3 is formulated for application via spray. For spraying, NC266-3 is ready to use directly from its container, no thinning required. When spray fluxing, it is imperative that proper flux coverage and uniformity be achieved and maintained. A dry flux coating of 500 to 1500 micrograms per square inch is recommended as a starting point.
- When nitrogen sealed wave solder equipment is used, it is generally necessary to apply slightly more flux than normal as a result of excess drying due to the extended length of the equipment.
- Monitoring and controlling the acid number is recommended for maintaining the flux composition. The acid number should be maintained between 14.2–15.2MG KOH/GRAM or 30– 32 drops using AIM's N.020 Titration Kit.

Process Control:

Due to the low percentage of solids in this flux, control of specific gravity with automated equipment usually is found to be ineffective; therefore, control via titration is necessary. AIM's Titration Kit has proven to be cost-effective, user friendly, quick and accurate. Titration should be carried out at least once an hour for flux foaming operations, or more often if large variances are found.

Thermal Profile:



RATE of RISE 2-3 ºC / SEC MAX	PROGRESS THROUGH 66˚C - 77˚C (150 - 170ºF)	PCB TOP SIDE TEMP 87˚C - 115˚C (190ºF - 240ºF)	COOLDOWN ≤ 4ºC
	≤ 40 SECONDS	JUST BEFORE WAVE	

Cleaning:

NC266-3 can be cleaned, if necessary, with saponified water or an appropriate solvent cleaner. Please refer to the AIM No-Clean-Cleaner Matrix for a list of suitable cleaning materials.

Handling:

- NC266-3 has an unopened shelf life of 1 year when stored at room temperature.
- Do not store near fire or flame. Keep away from sunlight as it may degrade product.
- NC266-3 is shipped ready-to-use, no mixing necessary.
- Do not mix used and unused chemical in the same container. Reseal any opened containers.

Safety:

- Use with adequate ventilation and proper personal protective equipment.
- Refer to the accompanying **M**aterial **S**afety **D**ata **S**heet for any specific emergency information.
- Do not dispose of any hazardous materials in non-approved containers.

Physical Properties:

Parameter	Value
J-STD-004	ORL0
Visual	Clear, Colorless
Odor	Aromatic (Slightly)
Solids Content	2.4%
Acid Number	14.65 mg KOH per gram flux

Parameter	Value
Specific Gravity	0.78 – 0.80 (water = 1)
Flash Point	< 10°C
Boiling Point	82°C
pH (1% solution /water)	Acidic

Corrosion Testing:

Parameter	Requirements	Results
Copper Mirror (24 hrs @ 25°C, 50%RH)	IPC-TM-650-2.3.32	Low
Halide Test (Silver Chromate)	IPC-TM-650-2.2.33	Pass

Surface Insulation Resistance:

Reference	Property	Pass-Fail Criteria	Results
IPC-TM-650 method 2.6.3.3 85°C / 85% R.H.	Control coupons	>1E+9 Ω at 96 and 168 hrs	9.17E+9 Ω and 7.53E+9 Ω Pass
	Sample coupons – pattern up	>1E+8 Ω at 96 and 168 hrs	1.01E+10 Ω and 8.33E+9 Ω Pass
	Sample coupons – pattern down	>1E+8 Ω at 96 and 168 hrs	6.34E+9 Ω and 5.61E+9 Ω Pass
	Post-test visual inspection	No dendrite growth or corrosion	Pass

Electromigration:

Test	Conditions	Specification	Results
Electromigration Bellcore GR-78 Flux Requirements	65°C/85% R.H. 500 hrs – Control	Rf/Ri > 0.1	Pass
	65°C/85% R.H. 500 hrs – Sample	Rf/Ri > 0.1	Pass

08/09
Rev 5