Solder plus Support

NC277 LIQUID FLUX

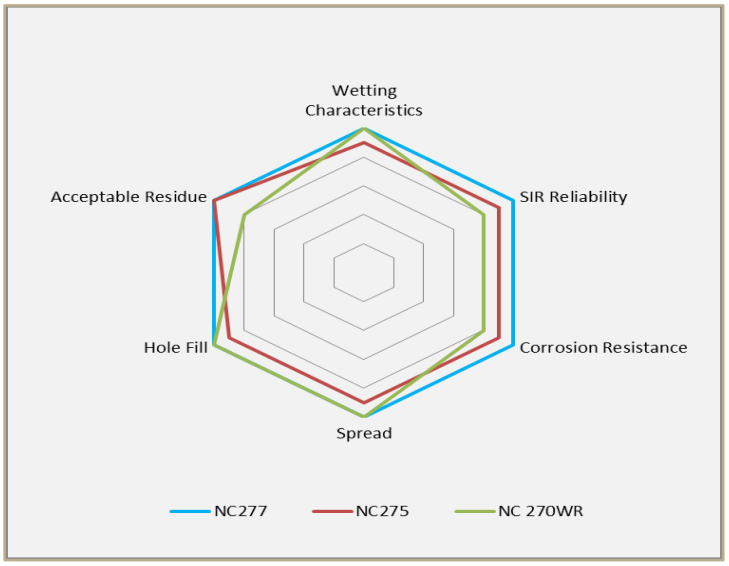
FEATURES

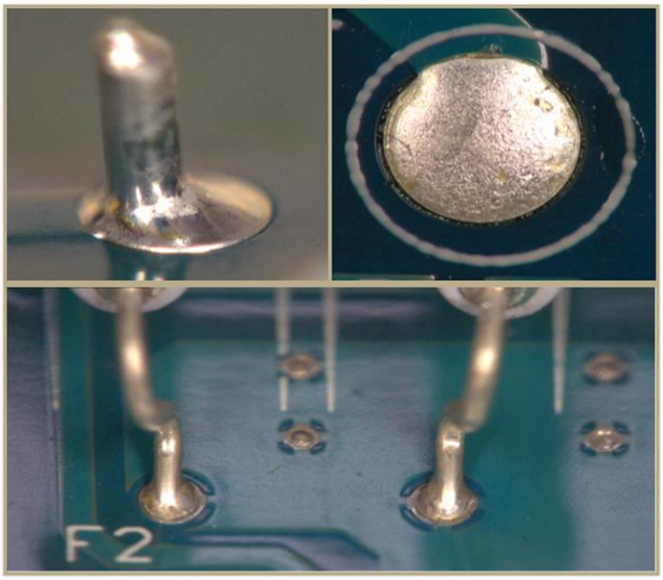
- VOC-Free
- Halide/Halogen-Free
- ORL0 per J-STD-004B
- Broad Process Window
- REACH Compliant
- Medium Post Process Residues
- Excellent in Extended Dwell Time
- Compatible with all Lead-Free Alloys

DESCRIPTION

NC277 Liquid Flux is a water-based VOC-Free flux that has performance and reliability characteristics equal or superior to many alcohol-based fluxes. A medium-solids/residue flux, NC277 has an exceptionally durable and powerful activator system. It is ideally suited for high thermal mass assemblies such as backplanes, power management, servers and palletized assemblies. NC277 can be used with all common lead-free wave soldering alloys including tin-silver-copper, tin-silver, tin-copper and others. Optimized for flux spray applications, NC277 has proven to reduce equipment maintenance. Designed as a no-clean, any remaining NC277 residue can be cleaned if critical to the product application.

CHARACTERISTICS





HANDLING & STORAGE

Parameter	Time	Temperature
Sealed Shelf Life	9 Months	4°- 40° C (40 - 100ºF).

NC277 is shipped ready-to-use, no mixing necessary. Do not mix used and unused chemical in the same container. Keep away from sunlight as it may degrade product. Reseal any opened containers. Protect from freezing.

APPLICATION

NC277 is formulated for application via spray, brush, mist, or dip. Foam fluxing is not recommended. NC277 is ready to use directly from the container. Proper flux coverage and uniformity will ensure consistent performance. An initial dry flux coating of 500-1500 micrograms per square inch is recommended. Process/quality requirements may require flux application quantities outside of these guidelines, e.g. full tunnel nitrogen application or palletized assemblies.

PROCESS GUIDELINES

Using thermocouples attached to the top of the PCB, the topside assembly temperature should be between 100-135°C (212-275°F) immediately prior to contacting the solder wave. As with all water based fluxes, convection type pre-heaters provide a wider process window. It is important that the flux be dry prior to entering the wave regardless of temperature or spattering will occur. Some smoking is considered normal if it is not excessive. Recommended contact time with the wave is dependent on wave configuration, pot temperature, alloy type and thermal mass of the assembly with 4-7 seconds being typical. For processing assistance, please contact AIM Technical Support by visiting http://www.aimsolder.com/technical-support-contacts.

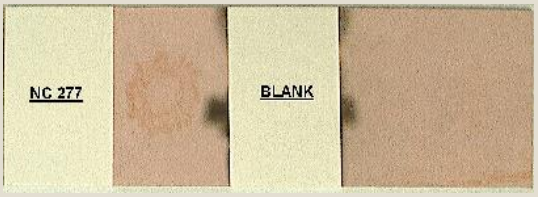
CLEANING

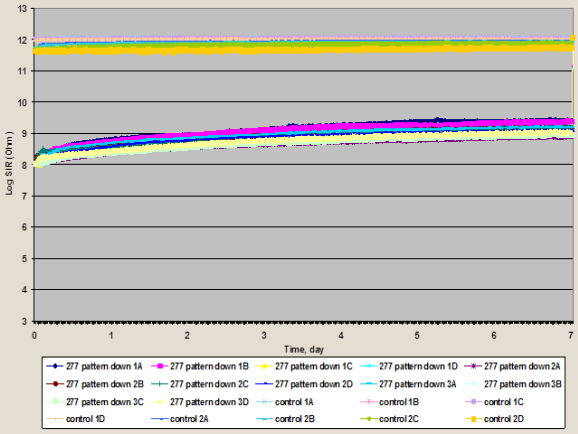
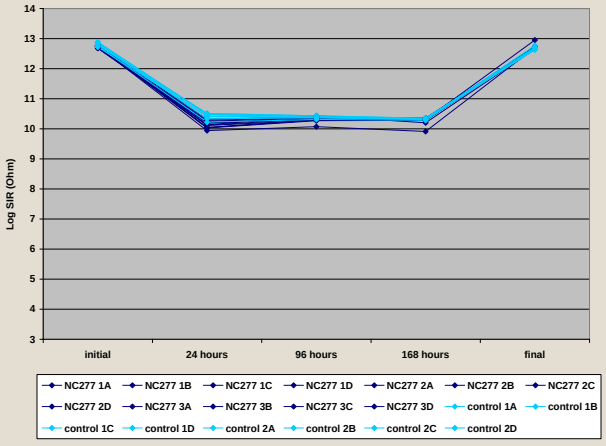
NC277 can be cleaned using a saponifier or chemical cleaners. Deionized water is recommended for the final rinse. Contact AIM for additional information.

SAFETY

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

TEST DATA SUMMARY

Name	Test Method	Results	
IPC Flux Classification	J-STD-004	ORL0	
IPC Flux Classification	J-STD-004B 3.3.1	ORL0	
Name	**Test Method**	**Results**	**Image**
Copper Mirror	J-STD-004B 3.4.1.1 IPC-TM-650 2.3.32	LOW	
Corrosion	J-STD-004B 3.4.1.2 IPC-TM-650 2.6.15	PASS	 Before  After
Quantitative Halides	J-STD-004B 3.4.1.3 IPC-TM-650 2.3.28.1	0.00%	Halide-Free

Name	Test Method	Results	Image
Qualitative Halides, Silver Chromate	J-STD-004B 3.5.1.1 IPC-TM-650 2.3.33	PASS	
Qualitative Halides, Fluoride Spot	J-STD-004B 3.5.1.2 IPC-TM-650 2.3.35.1	PASS	
Surface Insulation Resistance	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	PASS	
	J-STD-004 3.4.1.4 IPC-TM-650 2.6.3.3	PASS	
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	5.8% Typical	

Name	Test Method	Results	Image
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	50.16mg KOH/ g flux Typical	
Flux Specific Gravity Determination	J-STD-004B 3.4.2.3 ASTM D-1298	1.02 Typical	
pH (1% solution /water)	ASTM D5464 ASTM G51	~ 2.5	
Visual	J-STD-004B 3.4.2.5	Colorless	