

Technical Bulletin



Solder plus Support

NC275B No Clean Liquid Flux

DESCRIPTION

NC275B 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, NC275B can be used with all common lead-free wave soldering alloys including tin-silver-copper, tin-silver, tin-copper, and others. NC275B activity properties solve barrel fill and wetting issues common to many lead-free alloys. NC275B residues can be left in place after soldering or removed with an appropriate cleaning agent.

FEATURES AND BENEFITS

- VOC-Free
- Zero Halide/Halogen
- Broad Process Window
- Medium Post Process Residues
- REACH Compliant
- High Activity

APPLICATION

NC275B is formulated for application via spray or mist. Foaming is not recommended. NC275B is ready to use directly from its container, no thinning required. When spray fluxing, proper flux coverage and uniformity are imperative. A dry flux coating of 500-1500 micrograms per square inch is recommended as a starting point. When nitrogen sealed wave solder equipment is used, it may be necessary to apply additional flux.

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.

CLEANING

NC275B can be cleaned using a saponifier or chemical cleaners.

STORAGE & SHELF LIFE

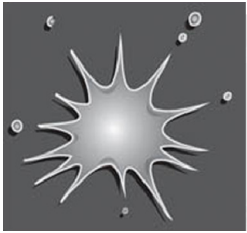
NC275B has a sealed shelf life of one (1) year when stored at room temperature. Do not store near fire or flame. Keep away from sunlight as it may degrade product. NC275B is shipped ready-to-use, no mixing necessary. Do not mix used and unused chemicals in the same container. Reseal any opened containers.

Parameter	Time	Temperature
Sealed Shelf Life	1 year	Room Temperature

HEALTH & SAFETY

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

Issue 1 - 18/04/24

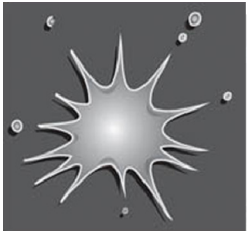


SOLDER CONNECTION

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TEST DATA SUMMARY

Name	Test Method	Results	Image
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 (minor corrosion)	<p style="text-align: center;">Before After</p>
Quantitative Halides	J-STD-004B 3.4.1.3 IPC-TM-650 2.3.28.1	Br 0.0% Cl: 0.0%	
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	No fluoride	
Surface Insulation Resistance	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	All measurements on all test patterns exceed the 100 MΩ	



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Name	Test Method	Results	Image
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	3.95 Typical	
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	31.3 Typical	
Flux Specific Gravity Determination	J-STD-004B 3.4.2.3 ASTM D-1298	1.00 Typical	
pH	ASTM D5464 ASTM G51	2.62 Typical	
Visual	J-STD-004B 3.4.2.5	Colorless	
Wetting	J-STD-005A 3.9 IPC-TM-650 2.4.45	PASS	

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