# Technical Bulletin

NC280 No Clean Liquid Flux

DESCRIPTION

NC280 No Clean Liquid Flux has been formulated specifically for high reliability applications including automotive, medical and military. NC280 unique formula passes J-Std-004A and B SIR without thermal exposure. NC280 is ideally suited to applications incorporating localized heat application such as hand soldering, selective soldering, tinning insulated wire, etc. NC280 can be effectively used will all leaded and lead-free alloys. NC280 leaves minimal post process residue that, if required, can be easily removed with most commercially available flux cleaners.

FEATURES AND BENEFITS

- Passes SIR in Raw State
- Ideal for Rework
- Halide-Free
- Excellent Wetting
- REACH/RoHS Compliant
- Hi-Reliability Applications

CHARACTARISTICS
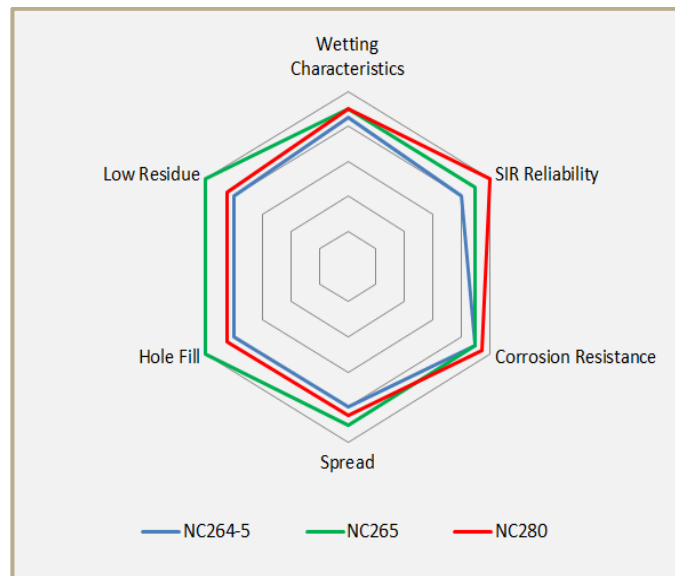

STORAGE & SHELF LIFE

Do not store near fire or flame. Keep away from sunlight as it may degrade product. NC280 is shipped ready-to-use, no mixing necessary. Do not mix used and unused chemical in the same container. Reseal any opened containers. Storage conditions range from 4°- 40° C (40 - 100°F).

Parameter	Time	Temperature
Sealed Shelf Life	1 year	Room Temperature

APPLICATION

NC280 can be applied via spray, flux bottle, flux pen, and dip. NC280 is ready to use directly from the container with no thinning required. A dry flux coating of 500-1500µg/in2 is typical.

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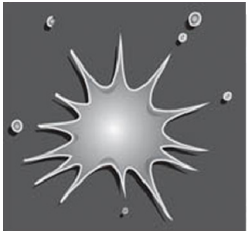
PROCESS GUIDELINES

For hand soldering use NC280 sparingly to minimize residue. For wire tinning, dip 50% of exposed wire into flux and tin normally. Flux level can be controlled by drain holes in the flux pot at the desired depth. Flux should be replaced daily to prevent contamination and control evaporative loss. For selective wave processes, the minimum pot temperature should be 280°C (typical range 280-300°C). Also, prior to contact with the wave, the top side temperature on the board should be at least 85°C (typical range 85-140°C).

CLEANING

NC280 residues can be removed with most commercially available flux removers. IPA is not recommended.

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.

TEST DATA SUMMARY

NAME	TEST METHOD	RESULTS	
IPC Flux Classification	J-STD-004	ROL0	
IPC Flux Classification	J-STD-004B 3.3.1	ROL0	

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	0.0	Zero Halide
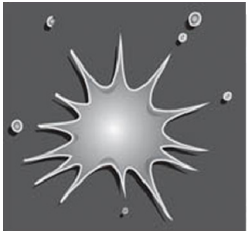
NAME	TEST METHOD	RESULTS	IMAGE
Qualitative Halides, Silver Chromate	J-STD-004B 3.5.1.1 IPC-TM-650 2.3.33	PASS	
Qualitative Halides, Fluoride Spot	J-STD-004B 3.5.1.2 IPC-TM-650 2.3.35.1	PASS	No Fluoride
Surface Insulation Resistance	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	PASS	Results available on request
	J-STD-004 3.4.1.4 IPC-TM-650 2.6.3.3	PASS	Results available on request
Electrochemical Migration	J-STD-004B 3.4.1.5 IPC-TM-650 2.6.14.1	PASS	
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	3.57% Typical	
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	12.8 mg KOH per gram flux Typical	
Flux Specific Gravity Determination	J-STD-004B 3.4.2.3 ASTM D-1298	0.79 (water = 1) Typical	
pH (1% solution /water)	ASTM D5464 ASTM G51	Acidic	
Visual	J-STD-004B 3.4.2.5	Light Yellow	