



MetaFlux™ NC-800

Product Bulletin

Alcohol Based No-Clean Flux

Metallic Resources' MetaFlux NC-800 is an isopropanol alcohol based low solids content no-clean soldering flux specially formulated for wave soldering applications where post-solder cleaning can be eliminated. It is halide-free, and contains only non-halide activators. It is less active than MetaFlux NC-810. MetaFlux NC-800 successfully replaces rosin-based fluxes, and it does not contain any rosin or resins. It is available in 1-gal. containers, 5-gal. pails, and 55-gal. drums.

Designed for Foam Fluxing

MetaFlux NC-800 is specially designed for wave soldering applications where elimination of post-cleaning is desired. It is successfully used in foam, spray, and drag fluxing soldering processes.

Benign Residues

MetaFlux NC-800 has a low solids content in addition to being halide-free, which allows the product to leave only negligible traces of benign residues. It promotes excellent solderability and leaves shiny solder joints. The flux does not spatter when coming into contact with molten solder.

Application Directions

MetaFlux NC-800 is formulated for foam fluxing applications as supplied. Specific gravity should be monitored. Add 800-T thinner if specific gravity increases beyond the desired level. Monitor by titration. The low residue flux solids are designed to be removed by the solder bath during soldering operations. When cleaning is necessary, hot de-ionized water (140°F or 60°C) completely removes remaining residue. A topside board temperature of 180-220°F (82-104°C) is recommended for best results. Solder as quickly as possible after fluxing.

Physical Properties

Form	Clear liquid
Color	Colorless
Specific Gravity	0.83 ± .005 @ 68°F (20°C)
Density	6.93 lbs./gal.
Solids Content	2.1%
Flash Point	60°F (15.5°C)
Boiling Point	173°F (78.3°C)
Freezing Effects	None
Discoloration	None
Chloride/Halide Content	None
Water Content	<3.0%
Acid Number	18-20
SIR Values (Average)	4.6x10 ¹¹ Ohms
Optimum Soldering Range	390-500°F (or 200-260°C)



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Safe ty Precautions

MetaFlux NC-800 is flammable and should be stored in plastic containers away from heat, sparks, open flame, and other sources of ignition. Use adequate ventilation to remove fumes. Avoid contact with eyes and skin. Do not inhale vapors or fumes. Keep away from children. Dispose of in accordance with all applicable regulations. This product has a two (2) year shelf life. Refer to the Material Safety Data Sheet (MSDS) for additional information.

Standar ds Met

IPC ANSI J-STD-004, Type ORL0

IPC J-STD- 004

Speci fication Test Results

Metallic Resources' MetaFlux NC-800 meets IPC J-STD-004, Type ORL0 classification.

Copp er M irror Test

The test method is designed to determine the removal effect the flux has on a copper mirror. (IPC-TM-650, 2.3.32)

Result: No Breakthrough

Rating Category: L

Presence of Halid es (Silver Chromate M ethod)

The test method is designed to determine the presence of chlorides and bromides in solder flux (IPC-TM-650, 2.3.33)

Result: Passes

Fluorid es by Spo t Test

This test method is designed to determine the presence of fluorides in soldering flux. (IPC-TM-650, 2.3.35.1)

Result: Passes

Halid e Content

This test method is designed to determine the halide content of fluxes attributable to chlorides, bromides, and fluorides. The halide content is reported as the weight percentage of halide to the solid portion of the flux. (IPC-TM-650, 2.3.35 or 2.3.28 and 2.3.35.2 or 2.3.28)

Result: Passes (No chlorides or bromides present (0%).

Result: Passes No fluorides present (0%)

Solids Content

This test method is designed to determine the residual solids content of the liquid flux after evaporation of the volatile chemicals. (IPC-TM-650, 2.3.34)

Result: 2.1%

Corr osion Test

This test method is designed to subjectively determine the corrosive properties of the flux residue under extreme environmental conditions. (IPC-TM-650, 2.6.15)

Result: Moderate Corrosion.

Surface Insula tion Resistance (SIR) Test

The surface insulation requirements for fluxes shall be determined. (IPC-TM-650, 2.6.3.3)

Result: Passes. The flux exceeds the minimum requirement of 1.0E + 8 Ohms average.

Control Value:	5.965E + 12 Ohms
Pattern Side Up:	4.6025E + 11 Ohms
Pattern Side Down Cleaned:	4.6925E + 11 Ohms
Pattern Side Down Uncleaned:	4.8325E + 11 Ohms

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Recommendations made by this company and its representatives are based upon test data, experiments, and experience believed to be reliable. No guarantee of accuracy is made, however. All products are sold upon the condition that the buyer will make his own tests and assume the responsibility for the suitability of the product under his application and service conditions. Statements made herein will vary according to the nature of the surfaces to which the product is applied, application technique, and service condition. We in no event assume liability beyond the purchase price of our products involved and make as a condition of sale that we will refund the purchase price or replace materials proven to be defective and reported in a timely fashion, but no later than six (6) months after shipment. No representative of the manufacturer and/or seller has the authority to alter or extend these conditions.