Metallic Resources’ MetaFlux NC-800 is an isopropanol alcohol based low solids content no-clean soldering flux especially 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 ± 0.005 @ 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)**: 4.6x1011 Ohms
- **Optimum Soldering Range**: 390-500°F (or 200-260°C)
**Safety 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.

**Standards Met**

IPC ANSI J-STD-004, Type ORL0

**IPC J-STD- 004 Specifcation Test Results**

Metalllic Resources’ MetaFlux NC-800 meets IPC J-STD-004, Type ORL0 classification.

**Copper Mirror 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 Halides (Silver Chromate Method)**

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

**Fluorides by Spot Test**

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

**Halide 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%

**Corrosion 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 Insulation 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.

<table>
<thead>
<tr>
<th>Control Value</th>
<th>5.965E + 12 Ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern Side Up</td>
<td>4.6025E + 11 Ohms</td>
</tr>
<tr>
<td>Pattern Side Down</td>
<td>4.6925E + 11 Ohms</td>
</tr>
<tr>
<td>Pattern Side Cleaned</td>
<td>4.8325E + 11 Ohms</td>
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