

## No Clean, Halogen Free Flux

### Description

836LFNC is a halogen-free organic flux with low activity. It has a low solids content and leaves virtually no residue. Solder joints appear shiny after soldering, even without cleaning.

836LFNC is designed for wave soldering and surface mount assembly. It may be applied by spray, foam, or wave fluxing. It is also re-flowable in air or nitrogen.

### Features and Benefits

- Meets IPC J-STD-004B and type ORLO
- For both leaded and lead-free solders
- Fast wetting
- Residues do not require cleaning
- Rosin/resin free
- Halogen-free
- RoHS compliant

### Usage Parameters

| Properties                               | Value              |
|--|--------------------|
| Shelf life                               | 3 y                |
| Storage temperature limits <sup>a)</sup> | 0–27 °C [32–80 °F] |

a) Store in a dry area, away from sunlight.

## Properties

| Flux Properties                                       | Method             | Value                    |
|---|--------------------|--------------------------|
| Flux classification                                   | J-STD-004B         | ORLO                     |
| Flux type   | J-STD-004B         | Organic                  |
| Flux activity   | J-STD-004B         | Low                      |
| Halides by weight                                     | IPC-TM-650 2.3.35  | <0.5%                    |
| Surface insulation resistance (SIR)<br>SIR, J-STD-004 | IPC-TM-650 2.6.3.3 | $2.1 \times 10^9 \Omega$ |
| Copper mirror   | IPC-TM-650 2.3.32  | Pass                     |
| Acid number (mg KOH/g)                                | Titration          | 14–16                    |
| Cleaning requirements                                 | —                  | Recommended              |
| Physical Properties                                   | Method             | Value                    |
| Color   | —                  | Colorless                |
| Solids %  | —                  | 1.9–2.5%                 |
| Density   | J-STD-004B         | 0.81 g/mL                |
| Flash point   | Closed cup         | 12 °C [53 °F]            |

## Health and Safety

Please see the 836LFNC-liquid Safety Data Sheet (SDS) for further details on transportation, storage, handling, safety guidelines, and regulatory compliance.

## Application Instructions

1. Apply flux on the surface via dip, spray, foam, wave, or brush application.
2. Clean residue with MG 4140 or 413B flux removers.

## Recommended Operating Parameters

| Properties   | Value   |
|--|---|
| Amount of flux   | Foam, wave: 1 000–2 000 µg/in <sup>2</sup> solids<br>Spray: 750–1 500 µg/in <sup>2</sup> solids                                     |
| Foam fluxing parameters<br>Foam stone pore size<br>Flux level above stone<br>Chimney opening<br>Air pressure <sup>a)</sup> | 20–50 µm<br>25–40 mm [1–1.5 inch]<br>10–13 mm [3/8—1/2 inch]<br>1–2 lb/in <sup>2</sup>  |
| Top side preheat temperature   | 85–110 °C [190–230 °F]  |
| Bottom side preheat temperature  | 35 °C [65 °F]   |
| Conveyor speed   | 1.2–2.8 m/min [4–5 ft/min]  |
| Contact time in solder (chip and lambda)   | 2.5–4.5 s   |
| Solder pot temperature<br>Sn96.5/Ag3.5<br>Sn95/Ag5<br>Sn99.3/Cu0.7<br>SnAgCu<br>Sn95/Sb5                                   | 260–276 °C [500–530 °F]<br>280–296 °C [536–565 °F]<br>265–276 °C [510–530 °F]<br>271–276 °C [520–530 °F]<br>280–296 °C [536–565 °F] |

a) Adjust the air pressure to achieve the optimum foam height.

## Packaging and Supporting Products

| Cat. No.   | Packaging | Net Volume         | Net Weight       | Packaged Weight |
|------------|-----------|--------------------|------------------|-----------------|
| 836LFNC-1L | Bottle    | 1 L [1.05 qt]      | 810 g [1.78 lb]  | 912 g [2.01 lb] |
| 836-P      | Pen       | 10 mL [0.33 fl oz] | 8.10 g [0.28 oz] | 40 g [0.09 lb]  |

## Technical Support

Please contact us regarding any questions, suggestions for improvements, or problems with this product. Application notes, instructions and FAQs are located at [www.mgchemicals.com](http://www.mgchemicals.com).

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## Disclaimer

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