

No Clean, Halogen Free Flux

Description

8351 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.

8351 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 ^{a)}	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) 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 8351-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 ² solids Spray: 750–1 500 µg/in ² solids
Foam fluxing parameters Foam stone pore size Flux level above stone Chimney opening Air pressure ^{a)}	20–50 µm 25–40 mm [1–1.5 inch] 10–13 mm [3/8—1/2 inch] 1–2 lb/in ²
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 Sn96.5/Ag3.5 Sn95/Ag5 Sn99.3/Cu0.7 SnAgCu Sn95/Sb5	260–276 °C [500–530 °F] 280–296 °C [536–565 °F] 265–276 °C [510–530 °F] 271–276 °C [520–530 °F] 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
8351-125ML	Bottle	125 mL [4.22 fl oz]	101 g [3.56 oz]	140 g [0.31 lb]
8351-1L	Bottle	1 L [1.05 qt]	809 g [1.78 lb]	1 kg [2.21 lb]
8351-4L	Jug	4 L [1.05 gal]	3.23 kg [7.13 lb]	3.5 kg [7.72 lb]
8351-20L	Pail	20 L [5.28 gal]	16.1 kg [35.6 lb]	18 kg [40 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.

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