

PRODUCT DATA SHEET

WF-7742 VOC-Free

Wave Solder Flux

Introduction

WF-7742 is a VOC-free, no-clean flux specifically developed for Pb-free wave soldering of surface mount, mixed-technology, and through-hole electronic assemblies.

WF-7742 is a water-based, nonflammable formulation dramatically reducing VOC emissions and eliminating special storage requirements. A wide process window provides excellent solderability on difficult-to-solder assemblies and reduces solder balling.

Features

- Excellent surface wetting
- Eliminates cleaning
- Wide process window
- Use with Pb-free and SnPb assembly processes
- The SIR is compliant with IPC J-STD-004A

Physical Properties

Test	Result
Color	Clear
Specific Gravity @25°C (77°F)	1.014
@15.5°C (60°F)	1.014
Acid Value	36
Solids Content	5.76
Flash Point (°F TCC)	None
J-STD-004A Flux Type	ORLO
Shelf Life	18 months from date of manufacture

Packaging

- 5-gallon containers
- 55-gallon drums

Safety

WF-7742 is a nonflammable material. Standard handling precautions should be observed when handling this material.

Process Recommendations

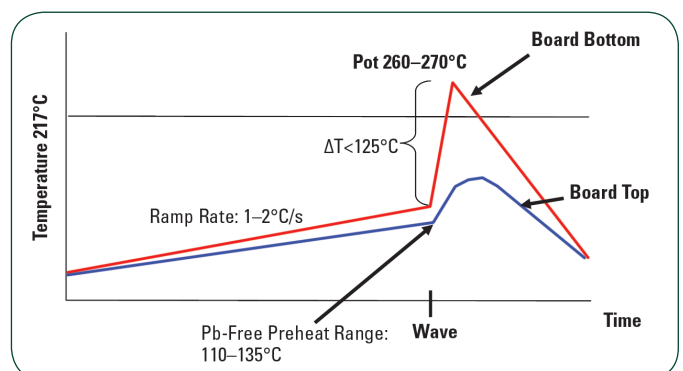
WF-7742 should be applied by ultrasonic spray for best results. Topside board temperatures can range from 110–135°C depending on equipment capability and assembly requirements. Contact with the solder wave can be as long as 5 seconds. Preheat temperature should be adjusted to ensure complete water removal before contact with the solder wave.

A thin uniform flux deposition of 1,000–1,500 micrograms per square inch of flux solids should be applied as a starting point.

Because **WF-7742** is water-based, it does not require frequent acid value monitoring. If thinning is required, deionized water should be used.

WF-7742 may freeze if exposed to temperatures below 0°C (32°F). If the flux becomes frozen, bring to room temperature until thawed and agitate. The material is not affected by freezing.

WF-7742 Recommended Profile for Pb-Free Wave Soldering



Technical Support

Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Material Science as it applies to the electronics and semiconductor sectors, Technical Support Engineers provide expert advice in solder preforms, wire, ribbon, and paste. Indium Corporation's Technical Support Engineers provide rapid response to all technical inquiries.

Safety Data Sheets

The SDS for this product can be found online at <http://www.indium.com/sds>

From One Engineer To Another®



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IPC Surface Insulation Resistance Test

Test Pattern	Boards	24 Hours*	96 Hours*	168 Hours*
IPC-B-24	Control	2.95×10^{13}	2.08×10^{13}	1.56×10^{13}
	Pattern Up	8.93×10^9	9.10×10^9	6.28×10^9
	Pattern Down	1.32×10^9	2.71×10^9	3.19×10^9

*All readings expressed in Ohms

IPC ECM/Telcordia EM Resistance Test

Test Pattern	Boards	96 Hours*	596 Hours*
IPC-B-25A	Control	9.97×10^{10}	9.03×10^{10}
	Pattern up	3.88×10^{10}	1.16×10^{11}
	Pattern down	5.23×10^9	3.62×10^{11}

*All readings expressed in Ohms

Telcordia GR-78 Surface Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC-B-25A	Control	8.69×10^{12}	1.40×10^{13}
	Pattern up	3.20×10^{11}	7.02×10^{11}
	Pattern down	6.75×10^{11}	4.72×10^{11}

*All readings expressed in Ohms

All information is for reference only.
Not to be used as incoming product specifications.

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All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.

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