

PRODUCT DATA SHEET

VOC-Free No-Clean Wave Solder Flux

1075-EXR-40

Features

- VOC-free formulation
- Excellent surface wetting
- Eliminates cleaning
- Increased activity
- Reduces solder balling
- Conforms to Telcordia GR-78 specification

Introduction

1075-EXR-40 is a non-halide, synthetic resin flux specifically developed for wave soldering surface mount, mixed technology and through-hole electronic assemblies.

1075-EXR-40 is a water based, non-flammable formulation eliminating special storage requirements, and dramatically reducing VOC emissions. **1075-EXR-40** is formulated to reduce solder balling and provide excellent solderability on difficult to solder assemblies.

Process Recommendations

1075-EXR-40 can be applied by spray or wave. Topside board temperatures for most circuit board assemblies can range from 93°–115°C depending on equipment, board size, board complexity, and conveyor speed (typically 4–6 ft./min). Preheat should be adjusted to ensure complete water removal before contact with the solder wave. Convection preheat is strongly recommended for optimum results.

Because **1075-EXR-40** is water based, it does not require frequent acid value monitoring. If thinning is required, the addition of deionized water is all that is necessary.

1075-EXR-40 may freeze if exposed to temperatures below 0°C. The material is not affected by freezing. If the flux becomes frozen, bring to room temperature until thawed, then agitate.

Physical Properties

Test	Result
Color:	Clear
Specific Gravity:	
@25°C (77°F)	1.019
@15.5°C (60°F)	1.019
Acid Value	40.0
Solids Content	5.0
Flash Point	None
Silver Chromate Paper Text	Pass
Copper Mirror Test*	Pass
Freeze/Thaw Test	Pass
J-STD-004 Flux Type	ORLO

* **Modified IPC/Bellcore Method:**

Passes the copper mirror test when the same flux is formulated with isopropanol or the solids from the water based formulation are reconstituted with isopropanol.

Packaging

- 5 gallon containers
- 55 gallon drums

Safety

1075-EXR-40 is a non-flammable material. Standard precautions should be observed when handling this material.

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 properties, alloy compatibility and selection of 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>

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Form No. 97779 (A4) R2

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ISO 9001
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Telcoridia Surface Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC-B-25 A 0.0125" wide lines 0.0125" spacing	Control	8.33 x 10 ¹¹	6.76 x 10 ¹¹
	Pattern up	4.79 x 10 ¹⁰	7.41 x 10 ¹¹
	Pattern down	1.43 x 10 ¹¹	2.17 x 10 ¹¹

*All readings expressed in ohms

Telcoridia Electromigration Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC-B-25 A 0.0125" wide lines 0.0125" spacing	Control	5.32 x 10 ¹⁰	2.23 x 10 ¹¹
	Pattern up	2.18 x 10 ⁹	1.14 x 10 ¹¹
	Pattern down	1.57 x 10 ¹⁰	1.50 x 10 ¹⁰

*All readings expressed in ohms

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