

PRODUCT DATA SHEET

1075-EXR-40

VOC-Free No-Clean Wave Solder Flux

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.

Features

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

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'/minute). 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) @ 15.5°C (60°F) | 1.019 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 |
| Shelf Life | 18 months |

***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

Please refer to the SDS document within the product shipment, or contact our local team to receive a copy.

From One Engineer To Another®



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Telcordia Surface Insulation Resistance Test

| Test Pattern | Boards | Initial Reading* | Final Reading* |
|--------------------|--------------|-----------------------|-----------------------|
| IPC-B-25A | Control | 8.33×10^{11} | 6.76×10^{11} |
| 0.0125" Wide Lines | Pattern up | 4.79×10^{10} | 7.41×10^{11} |
| 0.0125" Spacing | Pattern down | 1.43×10^{11} | 2.17×10^{11} |

*All readings expressed in Ohms.

Telcordia Electromigration Resistance Test

| Test Pattern | Boards | Initial Reading* | Final Reading* |
|--------------------|--------------|-----------------------|-----------------------|
| IPC-B-25A | Control | 5.32×10^{10} | 2.23×10^{11} |
| 0.0125" Wide Lines | Pattern up | 2.18×10^9 | 1.14×10^{11} |
| 0.0125" Spacing | Pattern down | 1.57×10^{10} | 1.50×10^{10} |

*All readings expressed in Ohms.

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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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