

Product Data Sheet

Wave Solder Flux

1075-EXR 30 VOC-Free

Features

- VOC-Free Formulation
- Excellent Wetting
- Eliminates Cleaning
- Reduces Solder Balling

Introduction

1075-EXR 30 VOC-Free is a non-halide, synthetic resin flux specifically developed for wave soldering of surface-mount, mixed-technology and through-hole electronic assemblies.

1075-EXR 30 VOC-Free is a water based, non-flammable formulation that eliminates special storage requirements, and dramatically reduces VOC emissions. **1075-EXR 30** is formulated to reduce solder balling and produce better solderability on difficult to solder assemblies.

Process Recommendations

1075-EXR 30 VOC-Free can be applied by spray or wave. Topside board temperatures for most circuit board assemblies can range from 93-115°C (200-240°F) depending on equipment, board size, board complexity, and conveyor speed (typically 4-6'/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 30 VOC-Free** 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 30 VOC-Free may freeze if exposed to temperatures below 32° F. If the flux becomes frozen, bring to room temperature until thawed, and agitate. The material is not affected by freezing.

Physical Properties

Test	Result
Color:	Clear
Specific Gravity: @25°C (77°F)	1.015
@15.5°C (60°F)	1.015
Acid Value	30.0
Solids Content	4.5
Flash Point	None
Silver Chromate Paper Test	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 30 VOC-Free is non-flammable. 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.

Material Safety Data Sheet

The MSDS for this product can be found online at <http://www.indium.com/techlibrary/msds.php>

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ISO 9001
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Telcoridia Surface Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC B24 0.0125" wide lines 0.0125" spacing	Control	5.14 X 10 ¹¹	6.11 X 10 ¹¹
	Pattern up	4.95 X 10 ¹²	5.99 X 10 ¹²
	Pattern down	2.58 X 10 ¹¹	2.56 X 10 ¹¹

*All readings expressed in ohms

Telcoridia Electromigration Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC B24 0.0125" wide lines 0.0125" spacing	Control	3.49 X 10 ⁹	4.32 X 10 ⁹
	Pattern up	3.21 X 10 ⁹	5.99 X 10 ⁹
	Pattern down	1.01 X 10 ⁹	2.43 X 10 ⁹

*All readings expressed in ohms

IPC Surface Insulation Resistance Test

Test Pattern	Boards	24 Hours*	96 Hours*	168 Hours*
IPC B24 0.0157" wide lines 0.0197" spacing	Control	2.23 X 10 ¹¹	2.19 X 10 ¹⁰	2.30 X 10 ¹¹
	Pattern up	1.63 X 10 ¹¹	2.51 X 10 ¹¹	9.89 X 10 ¹⁰
	Pattern down	7.39 X 10 ⁸	1.03 X 10 ⁹	1.94 X 10 ⁹

*All readings expressed in ohms

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