

## PRODUCT DATA SHEET

# Wave Solder Flux 3592

## No-Residue

### Introduction

**3592 Wave Soldering Flux** is a low-solids, rosin-/resin-free flux designed to leave a no-residue appearance. This flux contains very effective flux activators that provide excellent solderability and reduced defects on surface mount, through-hole, and mixed-technology assemblies.

**3592 Wave Soldering Flux** can be used with common board finishes, including HASL, Immersion Ag, ENIG, OSP, and other alternative coatings to provide excellent through-hole penetration resulting in better topside solder fillets.

### Features

- Rosin-/resin-free with ultra-low residue appearance
- Low residue won't interfere with probe testing requirements
- Can be conformal coated without cleaning
- Meets IPC and Bellcore reliability specifications

### Process Recommendations

**3592 Wave Soldering Flux** is best applied by ultrasonic spray. For best results, the following guidelines should be adhered to:

- In spray applications, a thin uniform flux deposition of 500–1,000 micrograms of flux solids per square inch should be applied as a starting point.
- Flux application variables, including flux deposition and uniformity, are integral factors when soldering with a no-clean chemistry. Topside board temperature should be approximately 93–104°C (200–220°F). Preheat temperatures can differ based on wave soldering equipment, fluxes, board thickness, components, and conveyor speed.

### Physical Properties

Test	Result	
	3592	16-3000
Color	Clear	Clear
Specific Gravity at 25°C (77°F) at 15.5°C (60°F)	0.820	0.783
	0.826	0.790
Acid Value	22.0	0
Solids Content	3.0	0
Flash Point (°F TCC)	54	54
J-STD-004 Flux Type	ORLO	N/A
Shelf Life	2 years from DOM	N/A

### Packaging

- 5-gallon containers
- 55-gallon drums

### Safety

All fluxes with low flash points should be handled with caution. Store in a dry, well-ventilated area away from sparks, flames, and direct heat. Consult the Safety Data Sheet for full details.

### 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 Sheet

The SDS for this product can be found online at [www.indium.com/sds](http://www.indium.com/sds)

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### Belcore Surface Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
Standard Belcore	Control	$2.89 \times 10^{13}$	$1.88 \times 10^{13}$
	Pattern up	$3.92 \times 10^{11}$	$3.78 \times 10^{11}$
	Pattern down	$1.18 \times 10^{13}$	$1.12 \times 10^{13}$

### Belcore Electromigration Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC-B25A	Control	$6.51 \times 10^{11}$	$3.01 \times 10^{11}$
	Pattern up	$6.99 \times 10^9$	$5.29 \times 10^9$
	Pattern down	$1.04 \times 10^9$	$5.18 \times 10^9$

### IPC Surface Insulation Resistance Test

Test Pattern	Boards	24 Hours*	96 Hours*	168 Hours*
IPC-B25A	Control	$1.81 \times 10^{10}$	$9.96 \times 10^9$	$7.55 \times 10^9$
	Pattern up	$1.25 \times 10^{10}$	$6.53 \times 10^9$	$5.31 \times 10^9$
	Pattern down	$1.15 \times 10^{10}$	$7.36 \times 10^9$	$6.78 \times 10^9$

\*All readings expressed in Ohms

All information is for reference only.

Not to be used as incoming product specifications.

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