

Product Data Sheet

Wave Solder Flux 3592 No-Residue

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

Introduction

3592 Wave Soldering Flux is a low solids, rosin/resin-free formulation 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** 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.

Process Recommendations

3592 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: @25°C (77°F)	0.820	0.783
	@15.5°C (60°F)	0.826
Acid Value	22.0	0
Solids Content	3.0	0
Flash Point (°F TCC)	54	54
J-STD-004 Flux Type	ORLO	N/A

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

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, direct heat. Consult Material 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.

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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Bellcore Surface Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
Standard Bellcore	Control	2.89 X 10 ¹³	1.88 X 10 ¹³
	Pattern up	3.92 X 10 ¹¹	3.78 X 10 ¹¹
	Pattern down	1.18 X 10 ¹³	1.12 X 10 ¹³

*All readings expressed in ohms

IPC Surface Insulation Resistance Test

Test Pattern	Boards	24 Hours*	96 Hours*	168 Hours*
IPC B25A	Control	1.81 X 10 ¹⁰	9.96 X 10 ⁹	7.55 X 10 ⁹
	Pattern up	1.25 X 10 ¹⁰	6.53 X 10 ⁹	5.31 X 10 ⁹
	Pattern down	1.15 X 10 ¹⁰	7.36 X 10 ⁹	6.78 X 10 ⁹

*All readings expressed in ohms

Bellcore Electromigration Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC-B25A	Control	6.51 X 10 ¹¹	3.01 X 10 ¹¹
	Pattern up	6.99 X 10 ⁹	5.29 X 10 ⁹
	Pattern down	1.04 X 10 ¹⁰	5.18 X 10 ⁹

*All readings expressed in ohms

This product data sheet is provided for general information only. It is not intended, and shall not be construed, to warrant or guarantee the performance of the products described which are sold subject exclusively to written warranties and limitations thereon included in product packaging and invoices.

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