PRODUCT DATA SHEET

3590-TX No-Residue

Wave Solder Flux

Introduction

3590-TX No-Residue Wave Solder Flux is a low solids, non-halide rosin/resin-free flux designed to eliminate post-cleaning operations. Very effective flux activators provide superior solderability, reduced defects, and shiny solder joint formation.

3590-TX has a wide process window with excellent wetting capabilities, leaving no residue and high surface insulation resistance.

Features

- Eliminates the need for cleaning
- Good solderability
- Low defects
- Compatible with conformal coatings without cleaning
- Meets Bellcore specification TR-NWT-000078

Process Recommendations

3590-TX 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.

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 Safety Data Sheet for full details.

Bellcore Surface Insulation Resistance Test

Pattern	Boards	Initial Reading*	Final Reading*
Standard Bellcore	Control	7.06×10^{13}	8.11×10^{13}
	Pattern Up	4.19×10^{10}	4.88×10^{11}
	Pattern Down	3.43×10^{12}	8.55×10^{13}

**All readings expressed in Ohms.*

Bellcore Electromigration Resistance Test

Pattern	Boards	Initial Reading*	Final Reading*
IPC-B25A	Control	1.33×10^{10}	1.42×10^{10}
	Pattern Up	5.38×10^{9}	8.79×10^{9}
	Pattern Down	1.69×10^{9}	3.94×10^{8}

**All readings expressed in Ohms.*

Physical Properties

Test	Result	
	3590-TX	16-3000
Color	Clear	Clear
Specific Gravity @25°C (77°F) @15.5°C (60°F)	 0.806 0.813	 0.783 0.799
Acid Value	22.0	0
Solids Content	2.5	0
Flash Point (°F TCC)	54	54
J-STD-004 Flux Type	ORL0	N/A

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

Technical Support

Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Materials 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

From One Engineer To Another®

Contact our engineers: askus@indium.com
Learn more: www.indium.com

ASIA +65 6268 8678 • CHINA +86 (0) 512 628 34900 • EUROPE +44 (0) 1908 580400 • USA +1 315 853 4900

Form No. 97715 (A4) R6