

## Product Data Sheet

# Wave Solder Flux

## 3541 No-Clean

**Features**

- Eliminates the need for cleaning
- Reduces solder ball formation
- Excellent solderability on standard board finishes and alternative coating

**Introduction**

**3541 No-Clean** is a low-solids flux specially formulated to be used for wave soldering where the solder cleaning process has been eliminated. This flux contains a small amount of resin which enhances the wetting properties.

**3541 No-Clean** is activated by a multi-component, synergistic fluxing system, which improves solderability. Any post-soldering residues are considered non-corrosive.

**3541 No-Clean** leaves a "tack-free" surface and does not interfere with ATE testing.

**Process Recommendations**

**3541 No-Clean** should be applied by spray for best results. A thin uniform flux deposition of 500-1,000 micrograms per square inch (77.5-155 micrograms/sq. cm) of flux solids should be applied as a starting point. This flux can be used effectively in single or dual wave soldering systems. Assemblies with surface-mount, leaded components or mixed-technology can be soldered successfully.

**3541 No-Clean** can be used successfully with all solderability preservative coatings and organic solderability protective coatings.

**Physical Properties**

Test	Result	
	<b>3541</b>	<b>16-3000</b>
<b>Color:</b>	<b>Straw</b>	<b>Clear</b>
<b>Specific Gravity:</b>		
@25°C (77°F)	<b>0.800</b>	<b>0.783</b>
@15.5°C (60°F)	<b>0.806</b>	<b>0.790</b>
<b>Acid Value</b>	<b>25.0</b>	<b>None</b>
<b>Solids Content</b>	<b>4.31</b>	<b>0</b>
<b>Flash Point (°F TCC)</b>	<b>54</b>	<b>54</b>
<b>J-STD-004 Flux Type</b>	<b>ORLO</b>	<b>N/A</b>

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

**Packaging**

- 5 gallon containers
- 55 gallon drums

**Safety**

Flammable liquids should always be stored in a dry, well-ventilated environment away from open flames, sparks or direct heat.

**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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# Wave Solder Flux 3541 No-Clean

## Bellcore Surface Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
Standard Bellcore	Control	$2.68 \times 10^{13}$	$1.88 \times 10^{13}$
	Pattern up	$3.18 \times 10^{12}$	$3.34 \times 10^{12}$
	Pattern down	$3.27 \times 10^{13}$	$3.48 \times 10^{13}$

All readings expressed in ohms

## IPC Surface Insulation Resistance Test

Test Pattern	Boards	24 Hours*	96 Hours*	168 Hours*
IPC B25A	Control	$1.74 \times 10^{10}$	$5.60 \times 10^9$	$3.76 \times 10^9$
	Pattern up	$1.18 \times 10^{10}$	$7.10 \times 10^9$	$5.55 \times 10^9$
	Pattern down	$8.50 \times 10^9$	$3.49 \times 10^9$	$3.21 \times 10^9$

All readings expressed in ohms

## Bellcore Electromigration Insulation Resistance Test

Test Pattern	Boards	Initial Reading*	Final Reading*
IPC-B-25A	Control	$6.51 \times 10^{11}$	$3.01 \times 10^{11}$
	Pattern up	$1.18 \times 10^{10}$	$8.58 \times 10^9$
	Pattern down	$1.14 \times 10^{10}$	$7.39 \times 10^9$

All readings expressed in ohms

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

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