

PRODUCT DATA SHEET

GS-5414

Solar Tabbing Flux

Introduction

GS-5414 is a no-clean flux for solar tabbing/stringing applications. It is formulated to provide a wide process window and can be used with SnPbAg, SnAgCu, and SnPb alloys. **GS-5414** wets the tabs and strings then quickly dries, leaving a uniform layer of flux that allows fast throughput.

Features

- Halogen-free
- Very low solids content
- Leaves cell dry and cosmetically clean after soldering
- Good solderability

Process Recommendations

GS-5414 can be applied by dipping or by spray. Connections can be completed by hand soldering or with the use of automatic equipment.

Hand Soldering Recommendations

1. Use the correct soldering tip. The chisel tip allows heat to flow across the ribbon, instead of only heating a single point. More heat flow equals more heat in the solder joint. Just as an appropriately sized soldering tip will distribute heat across the soldering surface, a small amount of molten alloy can help create a thermal interface to maximize heat transfer.
2. Pre-tin the soldering iron.
3. Consider the alloy for the compatibility with other alloys used in the process and to determine appropriate soldering iron tip temperature.
4. Use a bottom-side heater. Silicon is known to pull heat away; underside heating pads help prevent excessive heat loss.
5. Keep the iron clean. Oxides and charred flux residues can be easily removed by wiping the hot iron across a wet sponge that should be at the soldering station. This will lead to better heat transfer, and it will make the fluxes more effective.



Physical Properties

Test	Result
Color	Clear
Specific Gravity @25°C (77°F) @15°C (60°F)	0.803 0.809
Acid Value mgKOH/g flux	15.0
Solids Content	1.96%
J-STD-004D Flux Type	ORLO
Shelf Life	2 years

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

Packaging

- 1 pint evaluation size container
- 1 gallon container
- 5 gallon container
- Other packaging available upon request

From One Engineer To Another®

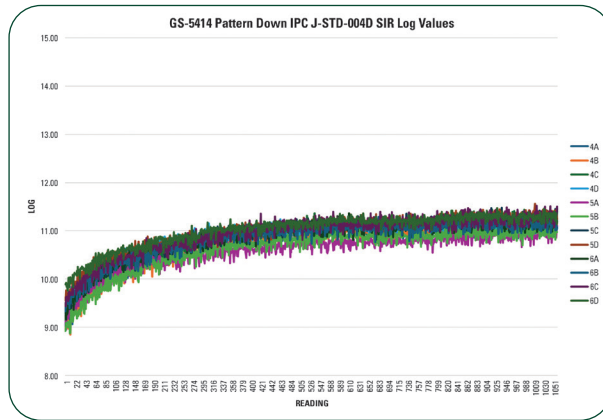
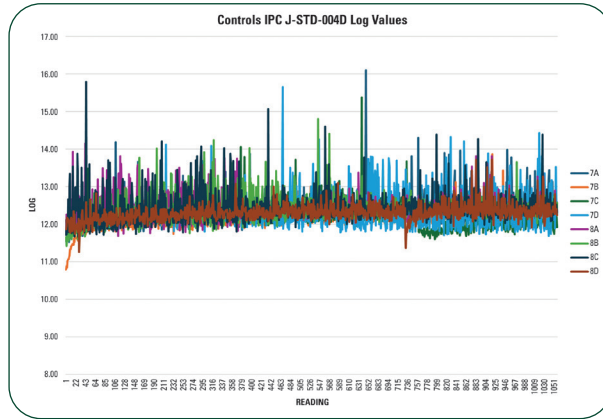
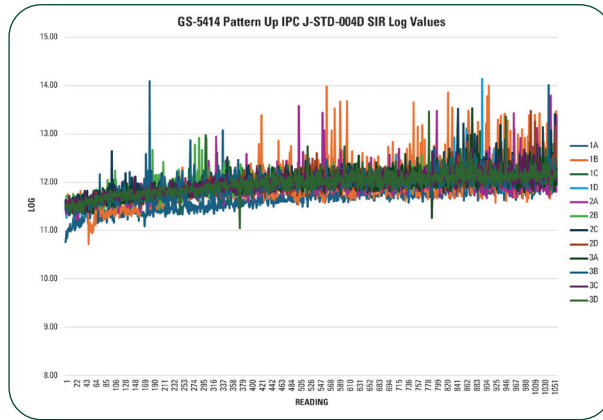


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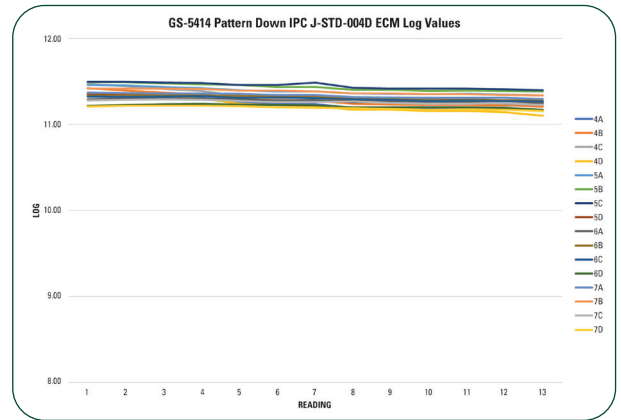
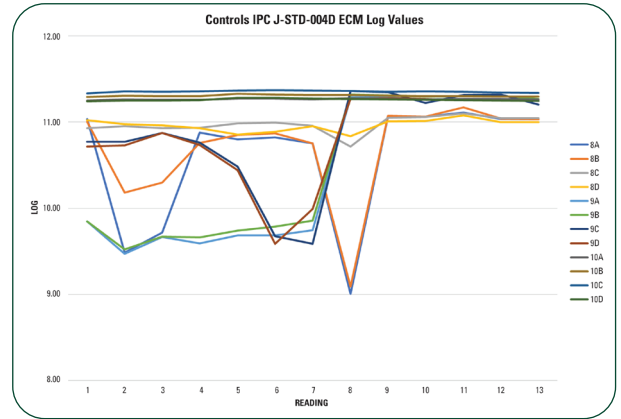
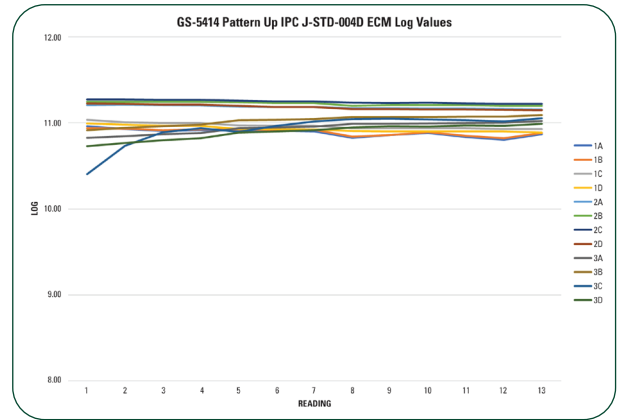
GS-5414 Solar Tabbing Flux

Surface Insulation Resistance (SIR)



	SIR Minimum Values	
	24+ Hours	ALL DATA
Pattern Up	11.05	10.72
Pattern Down	9.93	8.85
Controls	11.36	10.79

Electromigration (ECM)



	ECM Insulation Resistance	
	INITIAL	FINAL
Pattern Up	9.56E+10	1.09E+11
Pattern Down	2.34E+11	1.79E+11
Controls	7.21E+10	1.53E+11

Contact our engineers: askus@indium.com

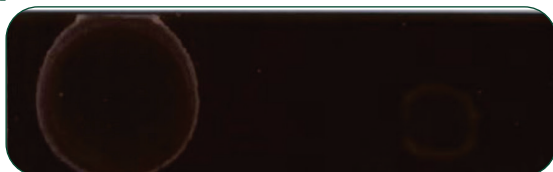
Learn more: www.indium.com



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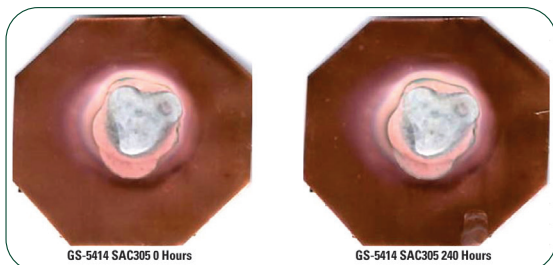
Copper Mirror



GS-5414

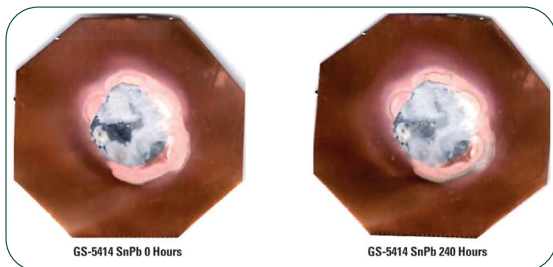
Standard Rosin

Copper Corrosion



GS-5414 SAC305 0 Hours

GS-5414 SAC305 240 Hours



GS-5414 SnPb 0 Hours

GS-5414 SnPb 240 Hours

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

Please refer to the SDS document within the product shipment, or contact our local team to receive a copy.

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. All Indium Corporation's products and solutions are designed to be commercially available unless specifically stated otherwise.

All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified.
Indium Corporation is an ISO 9001:2015 registered company.

Contact our engineers: askus@indium.com

Learn more: www.indium.com



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