

# PV Solutions

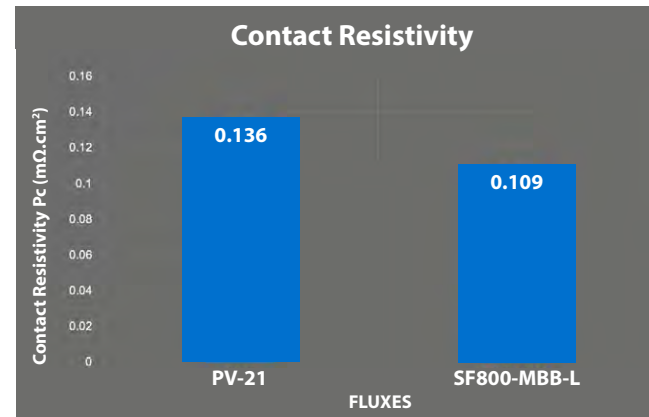
ALPHA® & Kester® PV Multi-Busbar Tabbing and Stringing Fluxes

## Fluxes that optimize Multi-Busbar assemblies, delivering best-in-class reliability and high throughput

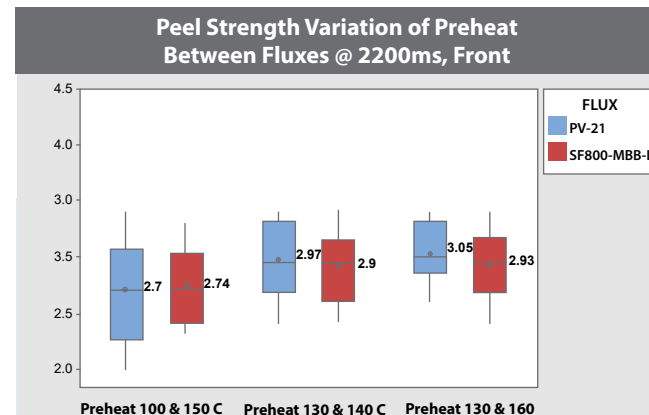
Alpha and Kester, leaders in PV assembly solutions, offer multi-busbar (MBB) tabbing and stringing fluxes designed to minimize the challenges in the assembly process. These fluxes enable quick activation in short soldering time and deliver excellent joint formation, even with reduced cross-sectional area of wire.

### Key Features

- Produce solid interconnects: good conductivity, high peel strength and reliability
- Excellent wetting for high yield and throughput
- Minimal and tack free residues for low equipment maintenance and downtime
- Compatible with different encapsulants
- Wide process window across different cells, equipment and process parameters
- Applicable for dipping or spraying method



All MBB Fluxes show low contact resistivity, eliminating the risk of high voltage drop in PV module system.



Good soldering and peel strength are seen for all MBB Fluxes.

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## AUTOMATED SOLDERING SYSTEMS

TECHNICAL DATA	ALPHA PV-21	Kester SF800-MBB-L
Solid Content	2.1%	1.5%
Acid Number (mg KOH/gm)	17.1	10.7
Specific Gravity	0.799	0.800
Flux Type, IPC J-STD-004	ORLO	
Halide Free	YES	

## APPLICATION PROCESS

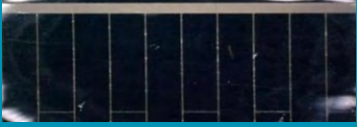
PROCESS CONTROL	ALPHA PV-21	Kester SF800-MBB-L
Flux Application	Dip	Spray*, Dip
Preheating Temp.°C	50 - 130	
Soldering Method	Contact Soldering, IR	
Soldering Temp.°C (SnPb)	200 - 280	

\*Preferred Application


**Flux Residue Analysis on Solar Cell**

After 8 hours @ 90 °C

**PV-21**



**SF800-MBB-L**



All MBB Fluxes show acceptable residue appearance and no delamination observed.

**EVA Compatibility**

**PV-21**



**SF800-MBB-L**



No yellowing and bubbling of EVA in any of the flux coated ribbon.



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Alpha and Kester are a product brand of MacDermid Alpha Electronics Solutions.

For more information, contact us at  
Assembly@MacDermidAlpha.com

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