

ALPHA[®] NP42U READY RIBBON FLUX

Transparent Ready Ribbon Flux for Inter-connecting cSi Solar Cells

DESCRIPTION

ALPHA NP42U Ready Ribbon Flux is an alcohol based, zero-rosin, halogen and halide free, no-clean flux used for coating photovoltaic (PV) ribbon designed. It eliminates the need for module assemblers to apply liquid flux during either manual or automated stringing operations. This virtually eliminates all the effort and costs associated with buying, storing and using a liquid flux. It also eliminates a potential hazard from the workplace if the liquid flux being used is flammable.

ALPHA NP42U Ready Ribbon Flux is designed to be pliable, so it does not chip or flake during handling or feeding in automated Combined Tapping and Stringing (CTS) equipment. The flux system activates at normal soldering temperatures so it can be dropped into most current liquid flux processes.

ALPHA NP42U Ready Ribbon Flux is specifically designed to meet the demanding requirements of the Photovoltaic industry when higher pull strength is deemed necessary. It is low in residues and non-tacky, minimizing time requires for equipment maintenance and reducing machine downtime. Flux residues are colorless, transparent and EVA compatible

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

Features	Benefits
<p>Eliminates module assembler issues associated with assembling cSi modules using a liquid flux</p>	<ul style="list-style-type: none"> • Increase throughput by maximizing production equipment up-time • Reduces flux related system maintenance including cleaning of residues and replacement of corroded parts • Eliminates presence of flammable material (flux) from module assembler production and inventory • Minimizes impact of residues on modules assembled using systems where flux is applied directly on the cell

Features	Benefits
Drop into most existing assembly process	<ul style="list-style-type: none"> • Easy transition to fluxless processing by end customer • Works well on all the most popular CTS equipment
Unique flux chemistry that is uniformly applied	<ul style="list-style-type: none"> • Tack-free residues for clean operation • Fast wetting speed improves production yield • Uniform coating and consistent amount of flux deliver optimum peel strength • No change in module reliability

APPLICATION GUIDELINES

ALPHA NP42U Ready Ribbon Flux is engineered to support Ready Ribbon coating process for standard solar module assembly applications. This flux has a wide process window and works well with standard reflow process. This is a no-clean flux; no cleaning is needed. ALPHA NP42U Ready Ribbon Flux can be maintained by titration. Acid number should be controlled between 12.0 to 17.0.

TECHNICAL DATA

Parameter	Typical Value	Parameter	Typical Values
Appearance	Clear, light yellow	pH, (5% solution)	3.20 to 4.20
Solids Content, wt/wt	4.0 +/- 0.3	Flash Point (T.C.C.)	11.7 °C
Specific Gravity @ 25 °C (77 °F)	0.780 to 0.820	Shelf Life	12 months
Acid Number (mg KOH/g)	12.0 to 17.0	IPC J-STD-004 Designation	ROL0

CORROSION & ELECTRICAL TESTING

Corrosion Test

Test	Requirements	Results
Silver Chromate Paper IPC-TM 650 Test Method 2.3.33	No detection of halide	Pass
Copper Mirror Test IPC-TM 650 Test Method 2.3.32	No complete removal of copper	Pass
Copper Corrosion Test IPC-TM 650 Test Method 2.6.15	No evidence of corrosion	Pass

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area or [link here](#).



SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available at MacdermidAlpha.com/assembly-solutions/knowledge-base.**

STORAGE

Recommend storing ALPHA NP42U Ready Ribbon Flux at temperatures between 10 to 42 °C. An unopened container stored under these conditions has a storage period up to 1 year.

CONTACT INFORMATION

**To confirm this document is the most recent version, please contact
 Assembly@MacDermidAlpha.com
www.macdermidalpha.com**

<p>North America 109 Corporate Blvd. South Plainfield, NJ 07080, USA 1.800.367.5460</p>	<p>Europe Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400</p>	<p>Asia 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.3190.3100</p>
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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