



**Florida CirTech**  
LEADERS IN PCB TECHNOLOGY

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# Technical Bulletin

## HARAJ65X Hot Air Flux

### I. Description:

HARAJ65X is a medium to high viscosity water-soluble flux formulated expressly for vertical hot air leveling systems, both manual and automatic. The viscosity is controlled to minimize de-wetting on surface mount pads and is formulated to insure first pass coverage on even difficult boards. HARAJ65X provides complete solder coverage on solder mask defined pads. There are also additives to this flux to minimize bridging on fine pitch surface mount pads. This flux is also especially suited for flat finishes on surface mount pads.

HARAJ65X has been formulated to give very low ionic contamination when used with an appropriate post cleaning process.

#### Benefits:

1. Complete solder coverage on solder mask defined pads.
2. Excellent solder cosmetics.
3. First pass coverage.
4. Formulated for low ionic contamination values.
5. Non-Foaming. Easy to rinse.
6. Additives to minimize bridging on tight tolerance boards.
7. Excellent protection of solder mask and laminate during extended dwell times.

#### Application:

HARAJ65X has a high flash point combined with good water solubility. When used, this flux should not be diluted or mixed with water or other chemicals. In automatic equipment, follow manufacturer's suggestions for equipment use. When used in manual machines, dip boards in flux and squeegee off excess (a thin film of flux is all that is required) and preheat. A dwell time of 2-4 seconds is recommended for best result (depending on the type of machine and the thickness of the board). Always rinse boards after processing because the flux remains active and will cause corrosion. DI water is recommended for final rinsing to lower ionic contamination. Rinse aids can also aid in reducing ionic residues if necessary.

### II. Operating Parameters

Make-Up	100% HARAJ65X
Temperature	Room temperature
Immersion Time	Not applicable
Process	Batch
Agitation	Not necessary
Ventilation	Advised
Tanks	Polypropylene, CPVC

Racks and Baskets	PVC Coated
Heaters	Not necessary
Filtration	Not necessary

### III. Physical Properties

Specific gravity	1.08 – 1.11
Appearance	Clear-Amber liquid
pH (5% soln)	1.0 to 3.5
Odor	Mild
Flash Point	> 550F
Viscosity (Brookfield)	180 – 240 cPs

### IV. Control Procedures

Consumption of flux is normally limited by drag out. Specific gravity should be controlled within 0.03 units. Dragging water in will lower the specific gravity and evaporation of water in flux will increase the specific gravity.

Ionic contamination can be reduced through the use of an appropriate post cleaning process. We recommend the use of RO water rinses, and a rinse aid chemical like our RA2000 product. Contamination levels as low as 0.1 micrograms per sq. inch of bromide ion can be obtained when using this hot air flux.

### V. Analysis

Specific gravity analysis can be used to add water if necessary (see section IV). This is not recommended for normal use of HARAJ65X flux.

### VI. Safety and Storage

HARAJ65X is acidic and should be handled with care. Avoid open flames. Do not store in direct sunlight, high temperature or below freezing.

### VII. Waste Treatment

Hot Air Fluxes should not be bled into waste treatment systems-especially resin columns and filtration units. Normally, the spent flux is pH neutralized with caustic soda and sent to a hazardous materials waste handler for fuel blending. Consult with local officials for further waste disposal regulations

Please ask a Florida Cirtech technical sales rep. for more information regarding waste treatment of this chemistry and our complete line of waste treatment line if additional help or information is desired.

### VIII. Miscellaneous

Available in 5-gallon pails and 55-gallon drums. Consult MSDS sheet for additional information.

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