# QUALITEK® 830VHF WATER SOLUBLE HALOGEN-FREE VOC-FREE FLUX

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## Description

Qualitek® 830VHF is a Halogen-Free VOC-Free Water Soluble flux designed for wave soldering and surface mount assembly applications. Qualitek 830VHF is designed to meet the most stringent cleanliness requirements. 830VHF also may be used for lead tinning applications.

Main Features

- VOC-Free
- Halogen-Free
- Excellent residue cleanability
- Lead tinning flux

### Technical Data

| | Specification | Test Method |
|---|---|---|
| **Flux Classification** | ORM0 | IPC-J-STD-004D |
| **Color and Appearance** | Light Amber Liquid | |
| **Copper Mirror** | Partial removal of copper film | IPC-TM-650 2.3.32 |
| **Specific Gravity (g/cm$^3$)** | 1.05 ± 0.01 | |
| **pH Value** | 2.75 ± 0.75 | |
| **Solids Content, % Wt.** | 17 ± 1.0 | IPC-TM-650 2.3.34 |

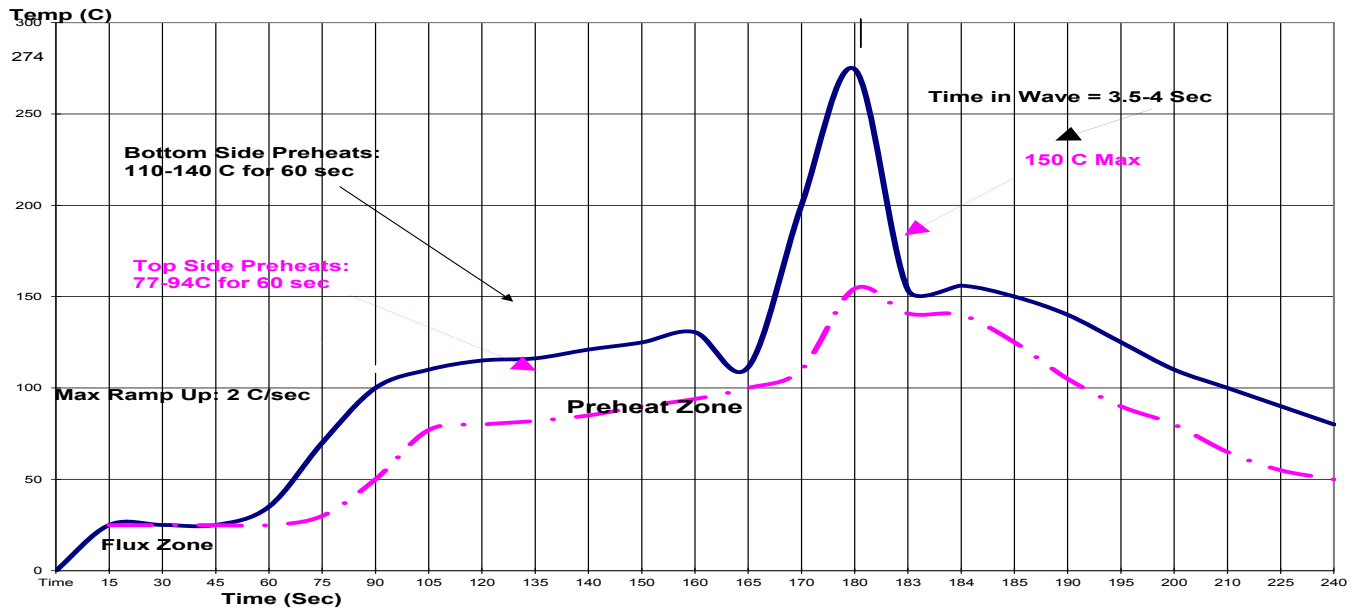
## Applications

**Flux Application**

830VHF is best applied by dip, spray or wave applications. Lower pre-heat temperatures are recommended since halogen-free, organic fluxes have a lower thermal stability than most rosin fluxes.

| OPERATING PARAMETERS | TYPICAL LEVEL |
|---|---|
| Amount of flux | Foam, Wave: 1000-2000 µg/in$^2$ solids<br>Spray: 750-1500 µg/in$^2$ solids |
| Top Side Preheat Temperature | 190-230 °F (85-110 °C) |
| Bottom Side Preheat Temperature | 65 °F (35 °C) higher than topside |
| Conveyor Speed | 4-6 feet/minute(1.2-1.8 meters/minute) |
| Contact Time in the Solder (including Chip & Lambda) | 2.5-4.5 seconds |
| Solder Pot Temperature<br>Sn63/Pb37 | <br>491-500 °F (255-260 °C) |

**TYPICAL Leaded Wave Solder Profile (Sn63/Pb37)**




## Process Control

Control of flux during use is necessary to assure a consistent amount of flux is applied to assemblies. If required, flux activity may be monitored by periodic measurement of the pH. De-ionized water may be used to adjust the pH to the specified value.

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Over time debris and contaminants may accumulate in the flux reservoir. Therefore, periodically replacing the flux and cleaning the reservoir is recommended for consistent performance and minimizing debris build-up.

## Flux Residues and Cleaning

Flux residues of 830VHF are completely soluble in water. Tap or soft water will remove residues from the assembly prior to drying where no neutralizer is required. We recommend de-ionized water be used in the final rinse. Spray pressures should be maintained at 20-30 psi and conveyor speed of 3-6 ft. /min.

## Storage & Shelf Life

Liquid flux should be stored in dry, well-ventilated area, away from direct heat and flame. Shelf life is 2 years from date of manufacture.

## Packaging

830VHF Liquid Flux is available in 1 Gallon and 5 Gallon containers and 55 Gallon drums.

## Disposal

830VHF contains hazardous ingredients, therefore, should be disposed of in accordance with federal, state, and local authority requirements.