

QUALITEK<sup>®</sup> 830VHF  
WATER SOLUBLE  
HALOGEN-FREE  
VOC-FREE FLUX

**CORPORATE HEADQUARTERS** USA: 315 Fairbank St. Addison, IL • 630-628-8083 • FAX 630-628-6543  
**EUROPE** UK: Unit 9 Apex Ct. Bassendale Rd. Bromborough, Wirral CH62 3RE • 44 151 334 0888 • FAX 44 151 346 1408  
**ASIA-PACIFIC HEADQUARTERS** SINGAPORE: 6 Tuas South St. 5 Singapore 637790 • 65 6795 7757 • FAX 65 6795 7767  
**PHILIPPINES:** Phase 1 Qualitek Ave. Mariveles, Bataan Philippines C-2106 • 6347 935 4163 • FAX 63475613717  
**CHINA:** 3B/F, YiPa Print Bldg. 351 # JiHua Rd., Buji Shenzhen, China 518112 • 86 755 28522814 • FAX 86 755 28522787

## 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
<b>Flux Classification</b>	ORM0	IPC-J-STD-004B
<b>Color and Appearance</b>	Light Amber Liquid	
<b>Copper Mirror</b>	Partial removal of copper film	IPC-TM-650 2.3.32
<b>Specific Gravity (g/cm<sup>3</sup>)</b>	1.05 ± 0.01	
<b>pH Value</b>	2.75 ± 0.75	
<b>Solids Content, % Wt.</b>	17 ± 1.0	IPC-TM-650 2.3.34

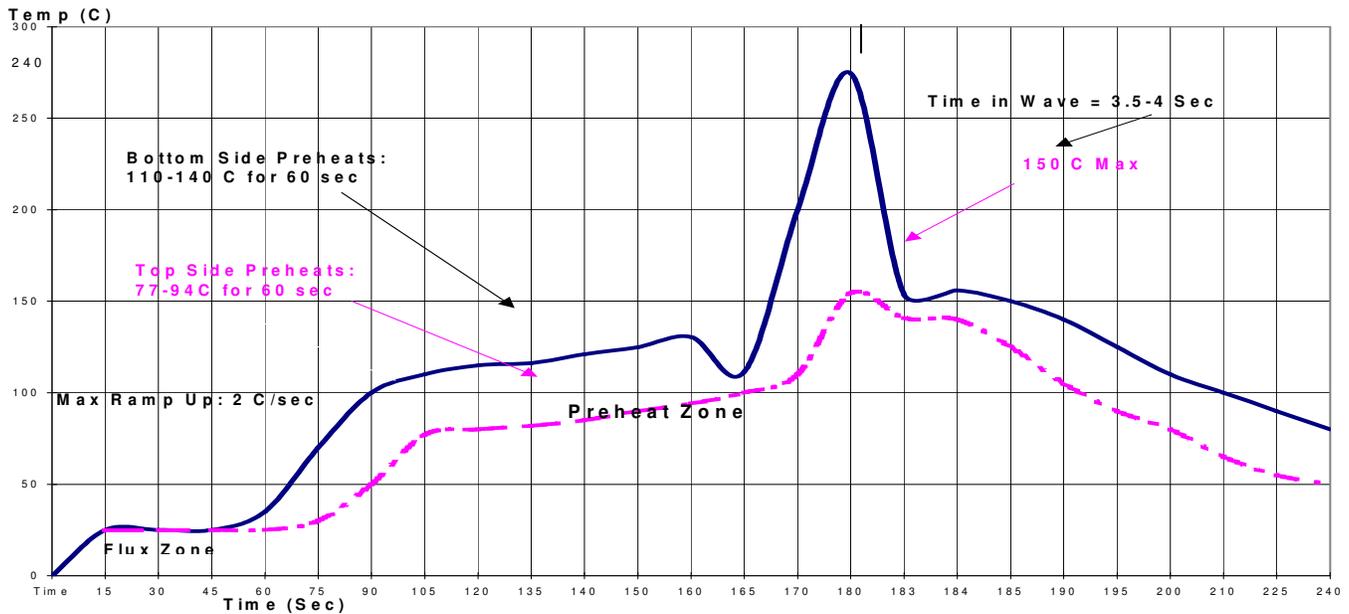
## Applications

### 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 <sup>2</sup> solids Spray: 750-1500 µg/in <sup>2</sup> 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	Sn63/Pb37 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.

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.

Qualitek® is a brand of Qualitek International, Inc.