QUALITEK® 545 ROSIN ACTIVATED FLUX

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Description

Qualitek® 545 is a Rosin Activated soldering flux composed of pure white-water gum rosin, a unique solvent system and very effective activators. 545 has superior fluxing activity and contains a foaming agent that promotes fast wetting. 545 flux complies with all requirements of ROM1 per IPC-J-STD-004B. 545 may also be used for solder coating or tinning leads.

Main Features

- Excellent foaming
- Non-corrosive residues
- May be used for coating/tinning applications
- Designed for Leaded solder systems

Technical Data

	Specification	Test Method
Flux Classification	ROM1	IPC-J-STD-004B
Color and Appearance	Amber Liquid	
Copper Mirror	Partial removal of copper film	IPC-TM-650 2.3.32
Corrosion	Pass	IPC-TM-650 2.6.15
Specific Gravity (g/cm^3)	0.923 ± 0.005	
Solids Content, % Wt.	50 ± 1.5	IPC-TM-650 2.3.34

Applications

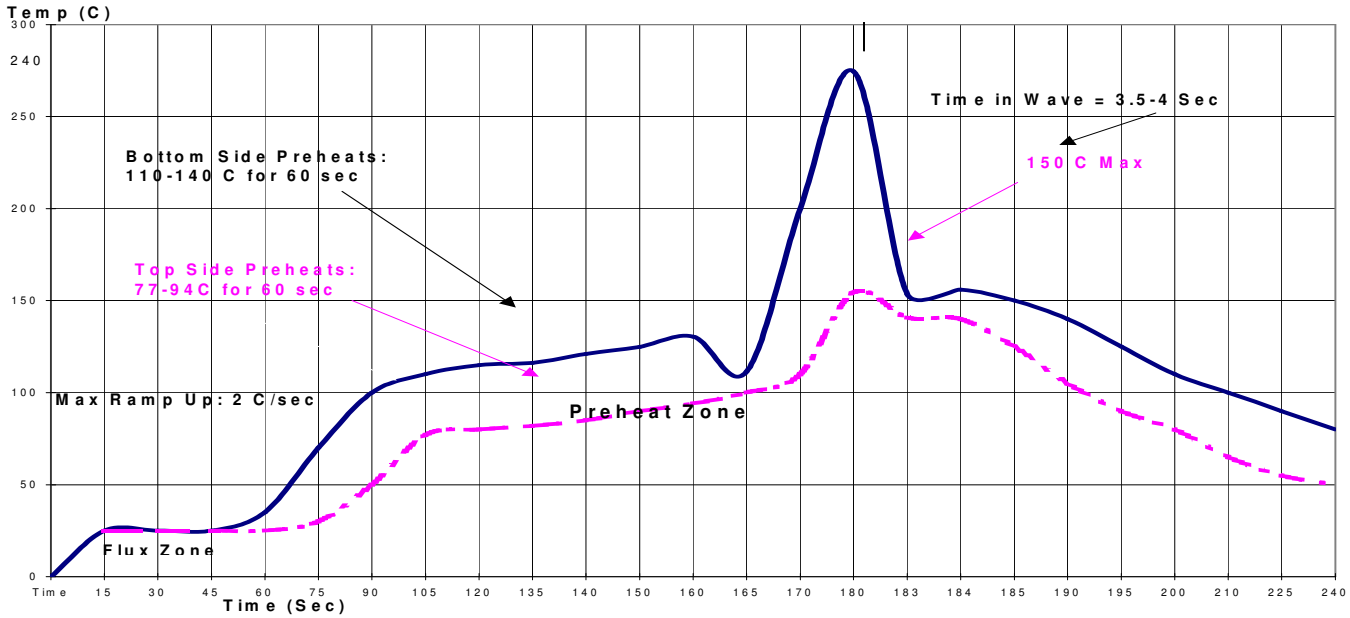
Flux Application

For mass wave soldering of OSP and plated circuit boards, spray, foam or wave fluxing can be utilized to apply this flux. If foam fluxing, the foam fluxer should be supplied with compressed air, which is free of oil and water. The flux tank should be full at all times. The surface of the flux should be 1-½ inches above the top of the flux aerator, or flux stone. Pressure should then be adjusted to produce the optimum foam height with a fine uniform foam head. After fluxing, an air knife should be used to remove excessive flux from the assembly.

Uniformity of the spray flux coating can be visually checked by running a tempered glass plate (usually supplied by machine manufacturer) through the spray and preheat sections, and inspected before going across the wave.

OPERATING PARAMETERS	**TYPICAL LEVEL**
Amount of flux	Foam, Wave: 1000-2000 µg/in^2 solids Spray: 750-1500 µg/in^2 solids
Foam Fluxing Parameters	
Foam Stone Pore Size	20-50 µm
Flux Level Above Stone	1-1 ½ inches (25-40mm)
Chimney Opening	3/8-1/2 inch (10-13 mm)
Air Pressure	1-2 psi
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 consistent flux deposition on the circuit board. Should RA 545 flux become too viscous due to solvent loss, control of the flux can be achieved with 500T thinner to maintain fluxing activity.

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

Post-soldering residues of RA 545 are non-corrosive and non-conductive so may be left on the assembly. Residues may be removed with Qualitek Everkleen 1005 Saponifier in an aqueous cleaning system.

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

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

Disposal

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