

SOLDER CONNECTION

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QUALITEK® Technical Bulletin

Delta 285-25 Rosin Mildly Activated Flux

DESCRIPTION

Delta 285-25 Flux is a Rosin Mildly Activated (RMA) fluxes formulated to meet the requirements of high speed soldering processes with activities close to a fully activated rosin flux. The higher solids content retains activity longer and will remain stable throughout the soldering process. Both 285 and 285-25 contain a unique activator and solvent system that prevents the activator from separating during a prolonged period of foam or wave fluxing.

FEATURES AND BENEFITS

- High solids (25%), rosin-containing flux
- Very heat stable
- Meets IPC-J-STD-004 ROL1 specifications
- Designed for Leaded solder systems

TECHNICAL DATA

	Specification	Test Method
Flux Classification	ROL1	IPC-J-STD-004B
Color and Appearance	Amber Liquid	
Copper Mirror	Pass	IPC-TM-650 2.3.32
Corrosion	Pass	IPC-TM-650 2.6.15
SIR	> 1 x 10 ⁸ ohms	IPC-TM-650 2.6.3.3
Specific Gravity (g/cm³)	0.843 ± 0.007	
Solids Content	25 ± 1.5	IPC-TM-650 2.3.34

APPLICATION

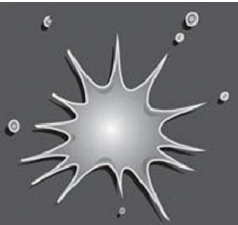
Flux Application

RMA fluxes (200 series) were originally designed for foam fluxing, but lower solids content in 285-25 can be applied by spray. If foam fluxing, the foam flux unit should be supplied with compressed air, which is free of oil and water. Maintain adequate and constant flux level in flux tank. 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)

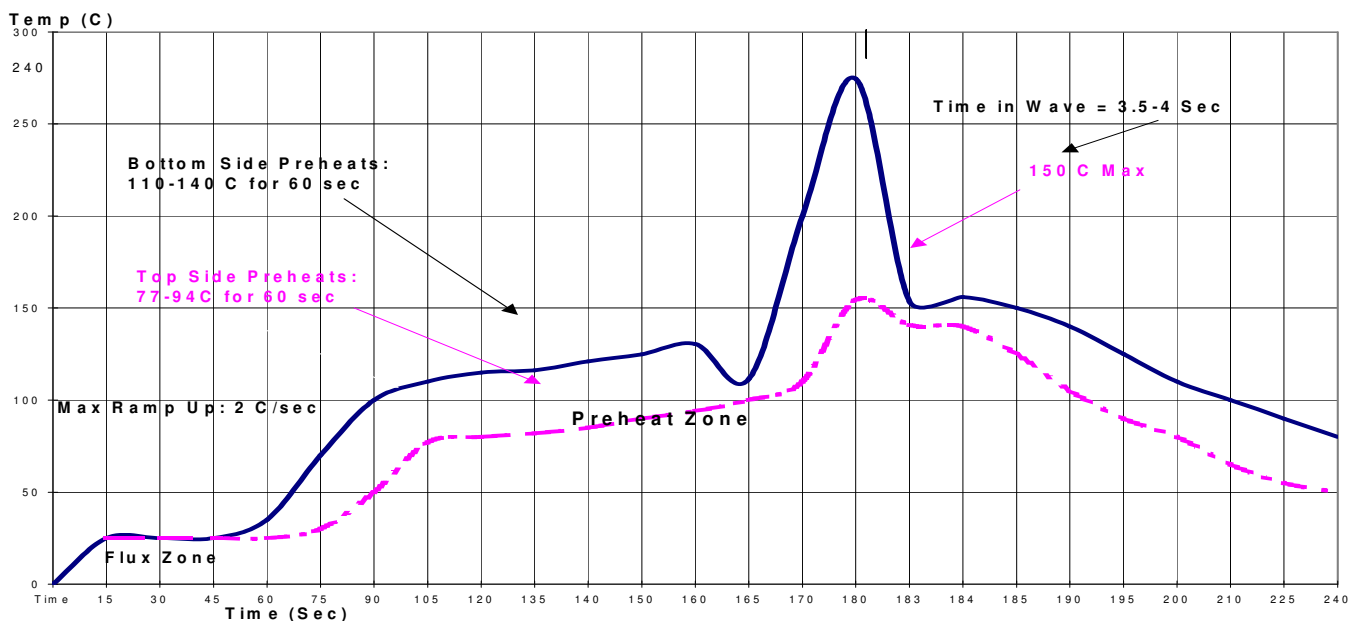
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TYPICAL Leaded Wave Solder Profile (Sn63/Pb37)



PROCESS CONTROL

Control of flux during use is necessary to assure consistent flux deposition on the circuit board. Should RMA 285-25 fluxes become too viscous due to solvent loss, control of the flux can be achieved with 200T 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.

PACKAGING

- 1L
- 5L
- 10L

CLEANING

Post-soldering residues 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

DISPOSAL

285-25 Flux contains hazardous ingredients, therefore, should be disposed of in accordance with local, regional and national requirements.

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