

# Technical Bulletin

## Delta 535MIL RA Flux

### DESCRIPTION

535MIL is a Rosin Activated flux composed of pure white-water gum rosin, a unique wetting agent and very effective activators. 535MIL meets ROM1 IPC-J-STD-004B specifications (formerly MIL specifications) and contains 35% solids for higher activity..

### FEATURES & BENEFITS

- Excellent foaming
- Non-corrosive residues
- Meets IPC-J-STD-004 ROM1 specifications
- Designed for Leaded solder systems
- Suitable for Dipping Applications

### TECHNICAL SPECIFICATIONS

	Specification	Test Method
<b>Flux Classification</b>	ROM1	IPC-J-STD-004B
<b>Color and Appearance</b>	Amber Liquid	
<b>Copper Mirror</b>	Partial removal of copper film	IPC-TM-650 2.3.32
<b>Corrosion</b>	Pass	IPC-TM-650 2.6.15
<b>Specific Gravity (g/cm<sup>3</sup>)</b>	0.856 ± 0.006	
<b>Solids Content</b>	35 + 1.5	IPC-TM-650 2.3.34

### CLEANING

Post-soldering residues of 535MIL are non-corrosive and non-conductive so may be left on the assembly. Residues may be removed with Everkleen 1005 Saponifier in an aqueous cleaning system.

### HANDLING & STORAGE

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

### AVAILABILITY

1L / 5L / 10L Containers

### PROCESS CONTROL

Control of flux during use is necessary to assure consistent flux deposition on the circuit board. Should 535MIL 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.

[solderconnection.com](http://solderconnection.com)

Unit 5 | Severn Link Distribution Centre  
Chepstow | Monmouthshire | NP16 6UN

[sales@solderconnection.co.uk](mailto:sales@solderconnection.co.uk)  
Office: 01291 624 400

## APPLICATION METHODS

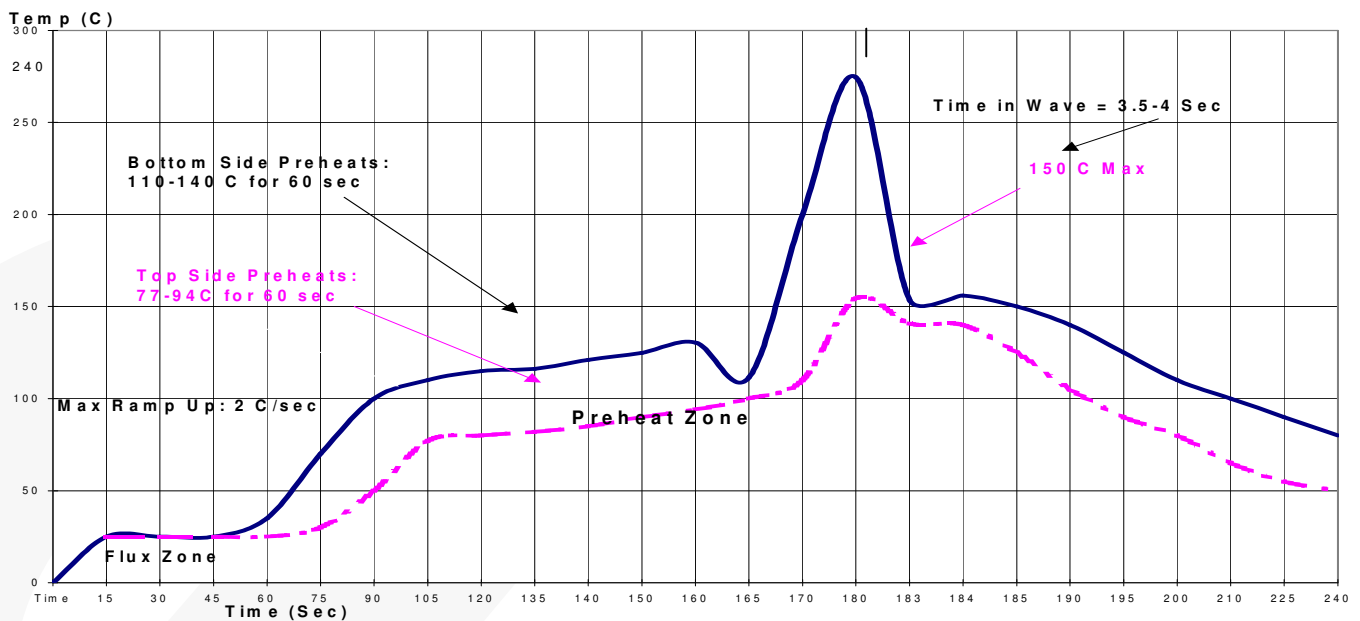
### Flux Application

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 <sup>2</sup> solids Spray: 750-1500 µg/in <sup>2</sup> 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)



## HEALTH & SAFETY

Use with adequate ventilation and proper personal protective equipment. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers. Dispose of in accordance with local, regional and national requirements.

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