

## ALPHA RMA 7 FLUX GEL

### DESCRIPTION

**RMA 7** is a rosin based flux gel designed for surface mount processes and other demanding electronics assembly applications, including rework, where post reflow cleaning is not required. Because of its unique activator package and other special additives, **RMA 7** flux gel is suitable to remain on the circuit board without cleaning

### FEATURES & BENEFITS

- Excellent rheology
- Unique Flux Vehicle
- Wide process window
- High tack
- Excellent no clean reliability

### APPLICATION

**RMA 7** flux gel should be applied by printing, dispensing or brushing

**RMA 7's** activator system enables the flux to penetrate even moderately tarnished surfaces among the following metals:

Silver  
Solder (Creams)  
Solder (Hot Dip)  
Cadmium (Plate)

Copper  
Gold  
Tin (Hot Dip)  
Tin (Plate)

**RMA 7** can be successfully reflowed in infrared, convection, hot stage, hot bar, belt or vapor phase systems.

### PROCESSING GUIDELINES

**RMA 7** can be safely left on the circuit board after reflow without cleaning. If cleaning is desired, most commercially available electronic assembly cleaning solvents are effective. Particularly effective is **Alpha Auto Clean 40**, which is a semi-aqueous cleaner designed to meet the most demanding cleaning requirements with complete environmental compatibility. Flux residues are also removable by saponification with **Alpha 2110** in water.

High ambient temperatures should be avoided in the handling of **RMA 7**. Storage temperatures of 0° - 10°C are sufficient to maintain **RMA 7's** nominal shelf life. **RMA 7** should be permitted to achieve room temperature before unsealing the package.

The production environment should be 18° - 27°C and 30% to 60% relative humidity. Production stencils can be cleaned using **Alpha SC1080 Fluid** in a dedicated screen cleaning machine.

### HEALTH & SAFETY

Observe standard precautions for handling and use. Use in well ventilated areas. DO NOT SMOKE. Avoid prolonged or repeated contact with the skin by the use of solvent resistant gloves. Avoid contact with eyes.

Flammable, keep away from sparks and open flames. Empty containers can still be a flammable hazard from residual vapours.

Remove skin splashes by immediate washing with soap and water.

In order to carry out your full COSHH assessment, consult the product Material Safety Data Sheet (MSDS)

The information contained herein is based on data considered accurate and is offered at no charge. No warranty is expressed or implied regarding the accuracy of this data. Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.



**PACKAGING**

RMA 7 is available in a variety of sealed jars and cartridges for dispensing.

**ALPHA RMA 7 TECHNICAL DATA**

CATEGORY	RESULTS	PROCEDURES/REMARKS
<b>CHEMICAL PROPERTIES</b>		
Activity Level	<b>ROL0</b> = J-STD Classification	IPC J-STD-004
Halide Content	<b>Pass</b> - Ag Chromate Test	IPC J-STD-004,
Copper Mirror Test	<b>Pass</b>	IPC J-STD-004,
Copper Corrosion Test	<b>Pass</b> , (No evidence of Corrosion)	IPC J-STD-004,
<b>ELECTRICAL PROPERTIES</b>		
SIR (IPC 7 days @ 85° C/85% RH)	<b>Pass</b> , > 2.4 x 10 <sup>9</sup> ohms	IPC J-STD-004 {Pass ≥ 1 x 10 <sup>8</sup> ohm min}
<b>PHYSICAL PROPERTIES</b>		
Color	Clear, Colorless Flux Residue	
Tack Force	>3.0 grams/mm <sup>2</sup>	IPC J-STD-005

**ALPHA RMA 7 PROCESSING GUIDLINES**

<u>STORAGE-HANDLING</u>	<u>PRINTING</u>	<u>REFLOW</u>	<u>CLEANING</u>
<ul style="list-style-type: none"> <li>•Refrigerate to guarantee stability @ 1-10°C</li> <li>•Shelf life of refrigerated paste is six months.</li> <li>•Warm-up of jar or cartridge to room temperature should be □ 6 hours.</li> <li>•Do not remove worked flux gel from stencil and mix with unused flux gel in jar. This will alter rheology of unused material.</li> </ul>	<p>SCREEN: Can be applied through a mesh screen using off-contact printing method</p> <p>SQUEEGEE: Polyurethane blades are recommended for screen printing, metal blades for stencil printing.</p> <p>PRESSURE: 0.15 to 0.25Kgs per cm of print pattern.</p> <p>STENCIL SEPARATION: Slow</p> <p>SQUEEGEE SPEED: 15-50 mm per second</p> <p>DISPENSE PRESSURE : Pressure should be similar to that of adhesive dispensing. Varies for each machine.</p>	<ul style="list-style-type: none"> <li>•Use convection, IR, or combination ovens, belt, hot -plate, vapor phase.</li> <li>•Clean-dry air or nitrogen atmosphere.</li> </ul> <p>PROFILE:</p> <ul style="list-style-type: none"> <li>- Ramp @ 60-120°C/min. to 120-160°C.</li> <li>- Dwell @ 120-160°C for 1.0-1.5 minutes.</li> <li>- Ramp @ 60-120°C/min to 215-220°C peak temp. Time over 183°C for 30-60 seconds</li> <li>- Ramp down to R.T. @ 90-120°C/min.</li> <li>-Ensure solder is frozen at exit of last heated zone to avoid disturbed joint defects.</li> </ul>	<ul style="list-style-type: none"> <li>•Although designed as a no-clean flux system, the residue may be cleaned with:</li> <li>• Autoclean 40 or</li> <li>• Alpha 2110 saponifier with water.</li> <li>• Clean stencils with Alpha SC-1080 stencil cleaner</li> </ul>



**European Headquarters:**  
Cookson Electronics Assembly Materials  
Forsyth Road, Sheenwater  
Woking, Surrey  
GU21 5RZ, United Kingdom  
Tel: +44 (0) 1483 793100  
Fax: +44 (0) 1483 793101

[www.alphametals.com](http://www.alphametals.com)

**Worldwide Headquarters**  
Cookson Electronics Assembly Materials  
600 Route 440  
Jersey City, New Jersey 07304  
USA  
Tel: +1 (201) 434 6778  
Fax: +1 (201) 434 7508

**Regional Offices**

Belgium:	Tel: +32 (0) 14 44 50 00
France:	Tel: +33 (0) 2 41 49 00 11
Germany:	Tel: +49 (0) 203 55540
Ireland:	Tel: +353 (0) 1 842 1172
Italy:	Tel: +39 (0) 2 38 33 11
Hungary:	Tel: +36 (0) 24 460 720
Netherlands:	Tel: +31 (0) 35 695 5411