



Fry Technology  
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## **RMA 093 Series Solder Paste**

### ***Rosin, Mildly Active***

#### **Description**

Fry RMA 093 is a mildly activated rosin flux designed for attaching leads to electronic components. It is easily cleaned with saponifier in water, yielding extremely high SIR assemblies. Solder paste made with this flux type has good wetting on tin, copper, silver, brass, indium bearing and plated surfaces. RMA 093 is compatible with all common alloy powders, and can be formulated into dispensing or printing grade rheologies. RMA 093 is the leading paste for attaching tin and tin/lead plated leads to metalized ceramic substrates.

#### **Uses**

RMA 093 pastes are excellent for bonding leads to components, bonding semi-conductors in diode assemblies, and many other applications where an RMA paste is specified. It is also ideal for bonding leads to thick-film tin, copper, silver and plated substrates. It has been proven effective with low melting 62/36/2 powders, through very high temperature powders like 10/88/2. Paste formulations can range from 200Kcps viscosity to 1,100Kcps. This means that RMA 093 pastes can be used for roller coating, dispensing and stenciling. As with all Fry Powerbond series pastes, it can be formulated into a variety of lead-free formulations as well.

#### **Reflow Profile**

RMA 093 based formulations can be successfully reflowed with a standard ramp, soak and reflow profile. An initial ramp up of 60° to 180°C per minute is recommended until a temperature of 160°C is reached. A soak temperature of 150° to 165° for 1 to 3 minutes is usually acceptable, followed by a rapid ramp-up to a temperature at least 15°C above the melting point of the alloy. When an open flame system is used, RMA 508 based formulations are recommended. Because of the infinite combination of solder alloys, and component thermal inertia, there is no one universal profile. Fry always recommends starting with a profile already developed for your process. It's usually the parts being soldered, not the paste, that determine the best reflow profile. Our technical staff is always available to help optimize your reflow profile.

#### **Trouble Shooting Guide**

##### **Problem**

Solder Balling  
Cold Solder Joints  
No solder reflow  
Poor wetting

##### **Solution**

Reduce the ramp-rate of the heat source  
Reduce the soak time prior to reflow  
Increase the peak temperature  
Try a more active WSOA