



Fry Technology  
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## **WSOA 906 Series Solder Paste**

### ***Water Soluble Organic Acid***

#### **Description**

Fry WSOA 906 is a water soluble paste flux. It is halide free, and has a neutral pH. Solder paste made with this flux type has good wetting on tin, copper, silver and plated surfaces. More active fluxes in the Fry OA series can remove plated finishes. WSOA 906 residues are readily washed in room temperature water, but either agitation or spraying is recommended to assure complete cleaning. WSOA 906 is compatible with all common alloy powders and can be formulated into dispensing or printing grade rheologies. WSOA 906 is an excellent all around paste when water washing is available.

#### **Uses**

WSOA 906 pastes are excellent for bonding leads to components, bonding tin, copper and silver plated. It has better wetting than RMA and no-clean type fluxes, but the residual flux must be cleaned to prevent post reflow corrosion. Paste formulations can range from 200Kcps viscosity to 1,100Kcps. This means that WSOA 906 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**

WSOA 906 based formulations can be successfully reflowed with a standard ramp, soak and reflow profile. An initial ramp up of 60° to 120°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. Less controlled (i.e. open flame reflow systems) also can be set to work perfectly with WSOA 906 solder paste. 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 flux (OA 800) or an IA type

## Cleaning

WSOA 906 residuals are easy to clean in warm water with mild agitation. With higher melting alloys, spray pressure is recommended to loosen the residual.

## Benefits

1. Use with all standard Powerbond Alloys from 136°F to 570°F
2. Excellent wetting on tin, copper, silver and plated substrates
3. Post cleaning SIR readings of 8 e 11 are easily obtained
4. Readily used with standard, existing reflow profiles
5. Many lead-free formulas available
6. Residues easily cleaned with water washing

## Physical Data

Property	Typical Values
Tack Time	6 hours
Viscosity Range	200Kcps to 1,100Kcps
SIR Post Cleaning (IPC-SP-819)	$2 \times 10^8$
SIR Post Cleaning (Bellcore)	$8 \times 10^{11}$
pH	6.8
Halide content	Zero

## Packaging

Powerbond solder pastes are available in syringes, cartridges, jars and 25 pound pails

## Safety

Consult the Material Safety Data Sheet for other pertinent information before using this product.

## Important Notice to Purchaser

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