

## WS890 Gel Flux

### Introduction

WS890 is an excellent water soluble gel flux for soldering and rework of surface mount assemblies. WS890 gel flux is designed for cleaning with D.I. water. WS890 can be used in dispensing, stencil printing and pin transfer applications. WS890 works well with leaded and lead-free alloys.

### Attributes

- Stable product with a long stencil / work life.
- Excellent print and dispense characteristics.
- Creates bright and shiny solder joints with a washable residue.
- Superior activity offering good solderability on all surface finishes.
- Works well for tin/lead and lead-free solder alloys.

Gel Flux Packaging	Part Number	Net Weight (Approximate)
Syringe 10 cc	WS890F10CC	5 grams
Syringe 30 cc	WS890F30CC	15 grams
Jar 150 cc	WS890FJ	90 grams

### Compatible Products

150N, 152N, 159HF liquid fluxes.  
WS890 solder paste.

### Storage and Handling

- Shelf life is 1 year when the gel flux is stored between 50 to 90 °F (10 and 32 °C) in a standard warehouse or office environment.
- Store the gel flux sealed inside of the original packaging.

### Application

WS890 gel flux is suitable for use in any electronic soldering application. WS890 is designed for stencil printing, pin transfer, dot dispensing and syringe applications. It can be used as a tacky flux for re-balling BGAs and soldering other components. WS890 is also suitable for touchup and rework soldering.

WS890 should be heated through normal soldering operations like SMT reflow, hand soldering, etc. Use the recommended parameters for that process and the solder alloy used.

### Cleaning

Raw gel flux can be removed from the stencil, squeegee blades, and circuit boards using a variety of commercial cleaners. Isopropyl alcohol (IPA) can also be used.

WS890 flux residues are corrosive and must be removed using a suitable wash process. It is recommended to remove WS890 flux residues within 4 hours after soldering using D.I. water heated to 100 - 180 °F in standard washing equipment. It is possible to wash away WS890 flux residues after multiple heat cycles followed by a 24 hour hold time, although this is not recommended.

<b>Safety</b>
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Wear chemically resistant gloves and safety glasses when using gel flux. Avoid contact with the flux and avoid breathing fumes, especially during soldering. Follow the guidelines in the Safety Data Sheet (SDS).

J-STD-004 Standard	Test Method	Result
J-STD-004 classification	J-STD-004 methods	ORH1
Visual appearance	Visual	Amber washable residue
Solids content	IPC 2.3.34	71 to 75% wt
Acid value	IPC 2.3.13	60 - 70 mg KOH / gram flux
Halide ion content (Br <sup>-</sup> , Cl <sup>-</sup> , F <sup>-</sup> , I <sup>-</sup> )	IPC 2.3.28.1	1.7 to 1.9% wt of solids
Halogen content (Br and Cl)	EN 14582, IPC 2.3.28.1	6.8 to 7.2% wt of solids
Halide by silver chromate	IPC 2.3.33	Halides detected
Fluoride by spot test	IPC 2.3.35.1	None detected
Copper mirror	IPC 2.3.32	High activity
Copper corrosion	IPC 2.6.15	Corrosion present
Surface Insulation Resistance (SIR)	IPC 2.6.3.7	Pass > 1.00E+08 ohms
Electro Chemical Migration (ECM)	IPC 2.6.14.1	Pass, increase in resistance