



JF8770 Water Based Cleaner

1. Product introduction

JF8770 is a new environmentally friendly water-based product developed by our patented technology. It breaks the cleaning method of conventional PCBA water-based cleaning agent, and can achieve the ideal cleaning effect at normal temperature (25~40°C). Short time and high efficiency. It has excellent removal ability for all types of no-clean solder paste residue, flux residue, oil stain, fingerprint, metal oxide layer, and electrostatic particles and dust. With the ultrasonic cleaning process, it can be used for high-precision cleaning of high-precision, high-density, high-frequency components such as microBGAs and Flip-Chips. The product is developed by our company's patented technology, with strong cleaning power, light odor and halogen-free. The mild formulation has good material compatibility for sensitive metals and electronic components used in FPC and other plates. It is an ideal environmentally friendly water-based cleaning agent.

2. Application range

JF8770 is used in the ultrasonic cleaning process and the spray cleaning process to remove solder paste and flux residues after the PCBA soldering process. There is also a certain solubility in oil stains. The specific application effects are listed in the list below.

Water soluble solder paste residue (after soldering)	☆☆☆
No clean solder paste residue (after soldering)	☆☆☆
Various types of flux residues	☆☆☆
Oil stain, fingerprint, metal oxide layer	☆☆☆
Electrostatic particles, dust, etc.	☆

Remark: ☆☆☆: Highly recommended; ☆☆: Recommended; ☆: Possible; O: Not recommended.

3. Advantage

- ✓ It breaks the conventional cleaning method of PCBA water-based cleaning agent, which can achieve the ideal cleaning effect at normal temperature (25~40°C).

- ✓ High cleaning load capacity, good filterability, long service life and low maintenance cost.
- ✓ It is suitable for the cleaning of precision electronic parts such as camera modules with high precision, high density and high clean cleaning requirements.
- ✓ The formula is mild, and it has good material compatibility for sensitive metal alloys and electronic components used in FPC and other plates.
- ✓ It has a very good cleaning effect on the no-clean solder paste residue, and at the same time can effectively remove the metal oxide layer and greatly reduce the COB binding defect rate.
- ✓ It can effectively remove static, dirt and metal ions, dust and other particles remaining on the surface of the wafer, and the cleaning rate is as high as 95% or more.
- ✓ Halogen-free, safe to use, no additional explosion protection is required, and the solder joint remains bright after cleaning.

4. Physical and chemical parameters

Classification	Water Based Cleaner
Appearance	Colorless stratified liquid (standstill), milky white color when use.
Density (23°C)g/cm ³	1.00±0.05
PH (10g/l H ₂ O)	11.0±0.5
Boiling range (°C/°F)	100-235/212-455
Flash point (°C/°F)	NA
Cleaning temperature (°C/°F)	25~40°C (77~104°F)
Halogen wt/wt	NA
Water soluble	Soluble
Application concentration %	100%

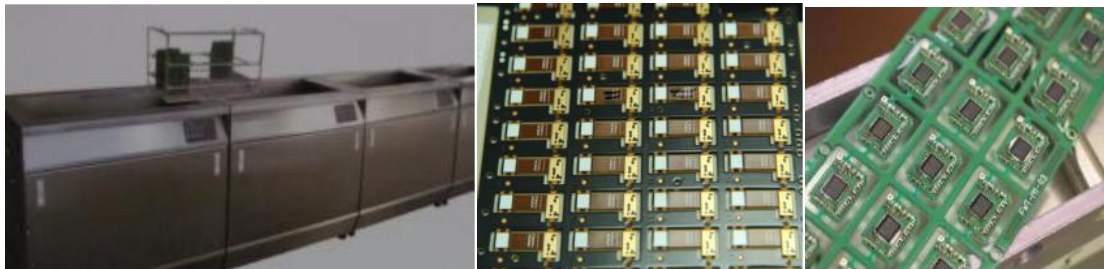
5. Instructions for use

The JF8770 is an alkaline water-based cleaner developed for PCBA post-weld cleaning for ultrasonic cleaning processes and spray cleaning. The following

describes the specific application of the JF8770 in the ultrasonic cleaning process.

5.1 Ultrasonic cleaning process

JF8770 Used in the ultrasonic cleaning process, it can clean the complex electronic assembly in batches, and it can achieve good cleaning effect for the flux residue with low clearance of the base. In the ultrasonic cleaning process, the parts to be cleaned are immersed in the cleaning tank, and the cavitation, acceleration and direct flow in the cleaning agent are combined with the super-solubility of the cleaning agent to make the dirt The layer is dissolved, dispersed, emulsified, or stripped for cleaning purposes. Process schematic as below.

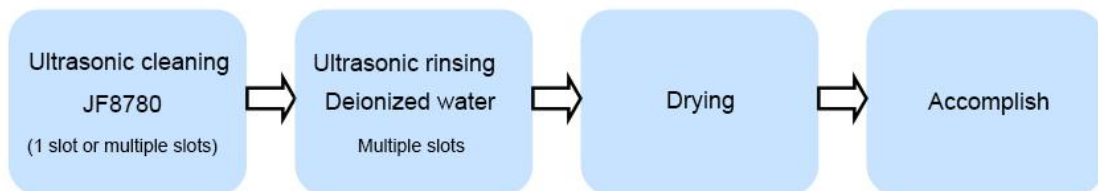


Ultrasonic PCBA cleaning machine

Cleaning object (after SMT)

Cleaning object

5.1.1 Technological process



5.1.2 Process application parameters

Item	Ultrasonic cleaning		Ultrasonic rinsing	Drying
	1 slot	Multiple solt	Multi-slot (two or more slots)	
Medium	JF8770		Deionized water	Hot air drying
Temp	25~40℃		25~40℃	100-120℃
Time	15-25min	10-15min / solt	10-15min every solt	>20min

5.1.3 liquid addition

The liquid addition has the addition of the cleaning liquid at the beginning of the

cleaning work, the replenishment during the cleaning process, and the replacement of the cleaning liquid.

- 1) The amount of detergent added to the tank can be adjusted according to the cleaning equipment, the number of workpieces to be cleaned, and the volume.
- 2) JF8770 is a two-phase liquid. When adding liquid, it is necessary to shake the cleaning solution and then add it.
- 3) JF8770 is an alkaline water-based cleaning agent. Wear protective equipment during operation to avoid skin contact or splashing into eyes.

5.1.4 Ultrasonic cleaning

- 1) JF8770 is used in the ultrasonic cleaning process. Due to the structural characteristics of the PCBA to be cleaned, there are two types of cleaning: single-slot cleaning and multi-slot cleaning. The multi-slot cleaning division is relatively fine and can achieve better cleaning results.
- 2) Ultrasonic frequency selection. The lower the ultrasonic frequency, the easier the cavitation in the liquid is, the greater the force generated, and the stronger the effect, which is suitable for the initial washing of the workpiece (coarse). The high frequency makes the ultrasonic direction strong, which is suitable for fine object cleaning. From the cleaning effect and economic considerations, the range of 20-130KHZ is generally selected. The specific frequency selection should be selected according to the precision requirements and cleaning requirements of the cleaning objects.
- 3) The total cleaning time is generally controlled at 15-25min. It can be set according to the structure of the cleaning member, the amount of residue, and the ease of cleaning.
- 4) JF8770 can meet the cleaning requirements at normal temperature. The higher the cleaning temperature, the stronger the cleaning power of the cleaning agent. However, if the temperature is too high, it will have a negative impact on the cleaning of the workpiece. The cleaning temperature is recommended to be controlled at 25~40 ° C. The actual situation of PCBA is optimal.

5.1.5 Ultrasonic rinsing

- 1) JF8770 is an alkaline water-based cleaning agent. The rinsing process is essential, and multi-slot rinsing can guarantee the high performance of PCBA.

- 2) Generally rinse with deionized water at room temperature.
- 3) The rinsing time can be adjusted according to the number of workpieces and the structure of the assembly. The total rinsing time is generally 20-30min.

5.1.6 Drying

- 1) Drying is generally carried out by hot air drying in the drying process.
- 2) The drying temperature should be controlled at 100-120 . Excessive temperature will have a negative impact on PCBA components.
- 3) The general drying time is not less than 20min, and the drying time can be adjusted according to the structural characteristics of the assembly and the hot air temperature.

5.1.7 Spray cleaning process

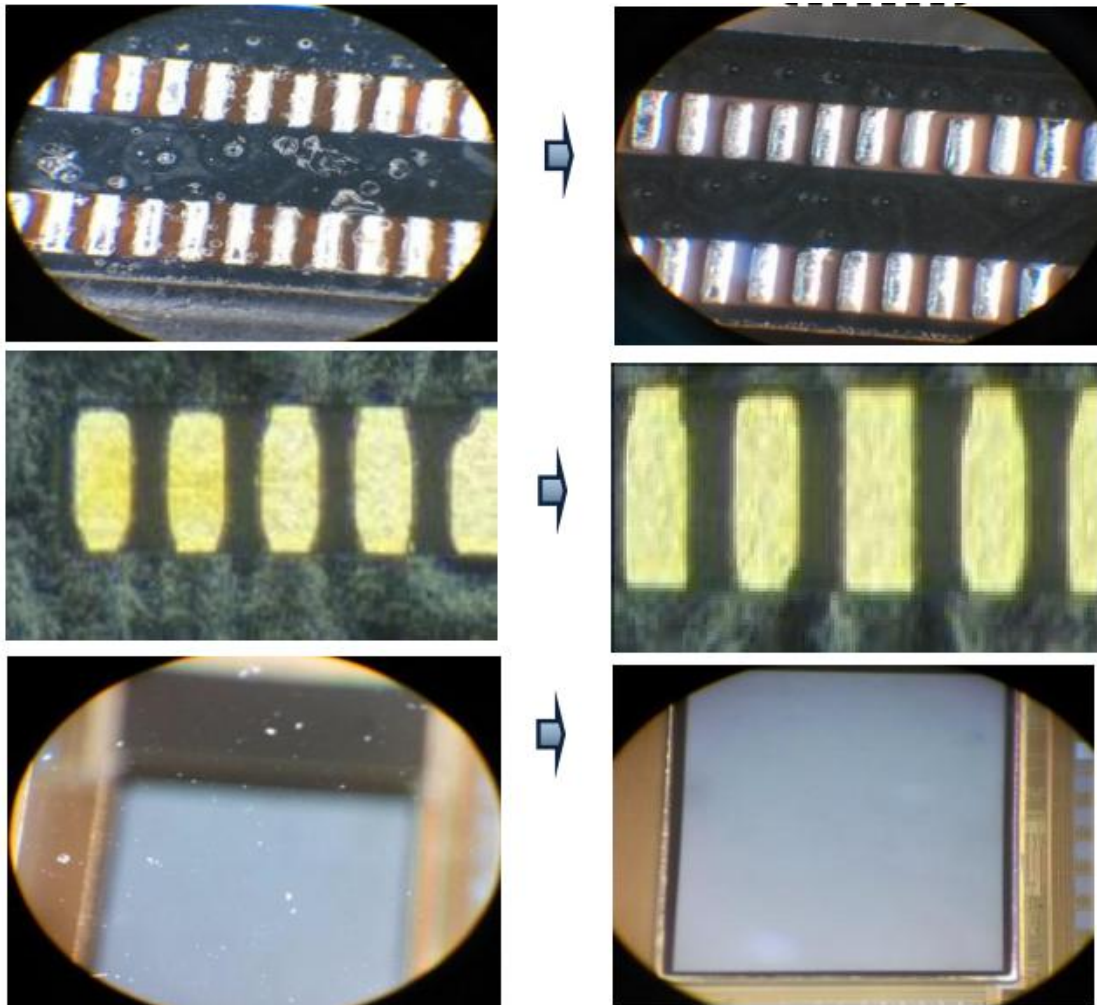
The JF8730 application can be used in the spray cleaning process to clean solder paste residues and red glue residues on various SMT steel meshes. Spray cleaning mainly uses a medium and high pressure spray pump to pressurize the cleaning liquid, and converts the low-flow cleaning liquid into a high-speed beam to wash the cleaning surface, thereby achieving the purpose of cleaning.

The specific process flow is: adding liquid-feeding-cleaning-drying-cutting. Briefly introduce the process application parameters and matters needing attention during the operation.

5.1.7 Process application parameters

- 1) Inspection method: The concentration of the JF8770 cleaning agent in the tank is monitored by a test instrument.
- 2) Replenishment method: During the ultrasonic cleaning process, the amount of the cleaning agent in the tank is depleted due to the stripping of the PCBA, and the liquid level of the cleaning agent is lowered, and the amount of the cleaning agent should be replenished in time, and the amount of the cleaning agent can be added to reach the liquid level line added for the first time. .
- 3) Replacing the solution: As the residue is continuously dissolved, the cleaning power of the cleaning agent will continue to decrease. When the cleaning ability does not reach the cleaning effect, the solution needs to be replaced in time. It is recommended to replace the cleaning fluid when the conductivity reaches

6000~15000 μ s/cm (TDS is 3000~5000mg/L). The replacement of the rinsing water is considered in combination with the actual application in terms of the number of rinsing tanks and the like.



Before Cleaning

After Cleaning

6. Environmental, health and safety regulations

- ✓ JF8770 is a neutral water based cleaner.
- ✓ Halogen and VOC ingredients are not included in the formulation.
- ✓ Safe to use, does not burn.
- ✓ It is harmless to the human body and has no corrosion to the equipment.
- ✓ Refer to the MSDS specific prevention and processing instructions.

7. Package

- ✓ Packing: plastic bucket, 20KG/barrel.



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- ✓ Label: JF8770 is a non-toxic, non-hazardous chemical that does not require a specific hazard identification.
- ✓ Storage: Store at room temperature and avoid direct sunlight and high temperature. The temperature is usually 0-40°C.
- ✓ Warranty period: one year (sealed), the production date is detailed in the packaging.

8. Precautions

- ✓ The operating site should have ventilation equipment to keep the air circulation in the workplace.
- ✓ Gloves should be worn during operation to avoid prolonged contact with the skin. If you accidentally touch your eyes, rinse with plenty of water and seek medical attention as soon as possible.
- ✓ Do not swallow, do not store in a range that children may reach.