

# Product Manual (TDS)

## JF8740 Water-based cleaning agent

### Product introduction

JF8740 is a new type of water-based cleaning agent developed by our patented technology. It is used to clean stubborn residues such as baked flux, rosin and oil on welding fixtures, fixtures, cyclones and condenser tubes. The product overcomes the industrial problem that the alkaline cleaning agent is incompatible with sensitive materials such as aluminum alloy fixtures, and has excellent material compatibility for aluminum alloy, synthetic stone and glass fiber materials. Because of its strong cleaning power, good material compatibility, halogen-free, low odor, no foam, etc., it can be applied to various cleaning processes such as ultrasonic, spray, soaking and manual brushing, and the service life is traditional surfactant type. 3-10 times the cleaning agent. Compared with the traditional solvent-based cleaning agent, JF8740 water-based cleaning agent completely eliminates the fire safety hazard, and can meet the ever-increasing environmental protection material level requirements and cleaning requirements, and conforms to the future development direction of the cleaning industry.

### Application range

JF8740 is suitable for ultrasonic cleaning process, spray cleaning process, manual brushing and immersion cleaning methods, cleaning of welding fixtures, fixtures, cyclone separators and condensed tubes of baked flux, rosin, oil and other stubborn residual substances, Various types of flux and solder paste residues have very good solubility, and the application effects are listed in the following list.

Application range: Cleaning and maintenance	
Solder paste residue	★★★
Water soluble flux residue	★★★
Rosin base flux residue	★★★
Low solid content flux residue	★★★
Synthetic flux	★
Smoke pollution	★★★

★★★: Highly recommended, best results;★★: recommend; ★: Possible;; O: Not recommended for use.

## Advantages

- \* Suitable for a variety of cleaning processes such as ultrasonic, spray, soak and manual brushing.
- \* Halogen-free, low odor, no foam, safe to use.
- \* The service life is 3-10 times that of traditional surfactant type cleaning agents, which greatly reduces the cost of use.
- \* The superior cleaning power completely removes all types of solder paste and flux residues, and is less prone to foaming during cleaning.
- \* Safety compatibility for sensitive materials such as brass, glass, ceramics, rubber, plastic, steel, composite materials, cast iron, aluminum alloy, etc.
- \* Does not contain VOC components and can meet the relevant regulatory requirements for VOC emissions.
- \* When cleaning non-stubborn dirt, the cleaning agent can be diluted 1 times with DI water, which can also achieve good cleaning results.

## Physical and chemical parameters

classify	Water-based cleaning agent JF8740
classify	Colorless to yellowish and slightly muddy liquid
Degree (23 °C) g/cm <sup>3</sup>	Dense 1.01 ±0.05
PH value (10g/l H <sub>2</sub> O)	11.0±0.5
Boiling range (C / F)	100-235/212-455
Flash point (C / F)	Not detected
Cleaning temperature (C / F)	20-50/ 68-122
Halogen wt/wt	Not detected
water-solubility	solvable
Application concentration%	50~100%

## Use instructions

JF8740 is a water-based cleaning agent developed for the cleaning and maintenance of various workpieces. It can be applied to various cleaning processes such as ultrasonic, spray, immersion and manual brushing. The following describes the application of JF8740 in several processes.

### ▲ Ultrasonic cleaning technology

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 dissolved, dispersed, emulsified, or stripped for cleaning purposes.

## 1.Process schematic diagram (figure 1, figure 2 visible)



图 1 超声波治具清洗机



图 2 治具放入清洗篮

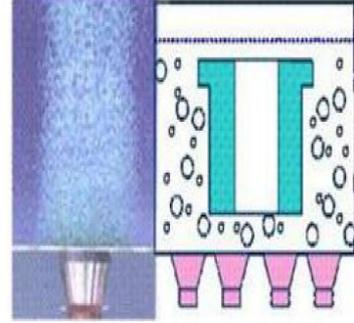


图 3 超声波工作原理图

## 2.Process application parameters

Item wash	Ultrasonic cleaning	dry
medium	JF8740	Wind cutting
temperature	20-50℃	Normal temperature
Cleaning time	3-10min	> 5min

## 3. Technological process

Add liquid → Feeding → Ultrasonic cleaning → (Ultrasonic rinsing) → Unloading → Drying

### 3.1 Add liquid

- (1) The amount of cleaning agent added to the tank can be adjusted according to the cleaning equipment, the number of workpieces to be cleaned, and the size of the volume.
- (2) The JF8740 water-based cleaning agent has an extremely long service life. When the cleaning effect is not satisfactory, pay attention to the replacement of the cleaning solution.
- (3) JF8740 is an alkaline water-based cleaner. Wear protective equipment during operation to avoid skin contact or splashing into eyes.

### 3.2 Ultrasonic cleaning

- (1) The workpiece to be cleaned is placed in a washing basket and immersed in the cleaning liquid for cleaning. The washing basket can be automatically raised and lowered, and the height can be adjusted.
- (2) The cleaning time can be set according to the type and state of the dirt. The ideal cleaning time is generally controlled at 3-10min.
- (3) It can be cleaned at room temperature. The temperature of the cleaning solution will rise during the cleaning process. The higher the temperature, the stronger the cleaning power of the cleaning agent. Excessive temperatures can have a negative effect on cleaning the workpiece. It is recommended that the cleaning temperature be controlled at 20-50 °C.
- (4) JF8740 alkaline water-based cleaning agent has superior cleaning power. When the dirt layer on the workpiece is easy to clean, the JF8740 can be diluted 1 times with DI water, which can also achieve the cleaning effect.

(5) It has a strong holding capacity. When the residual material to be cleaned accounts for 30% by mass of the cleaning liquid, the cleaning liquid still has a strong cleaning power, but at this time the solution has become very turbid and viscous. Therefore, the replacement of the cleaning fluid should not be based on the cleaning power to the limit, and can only be judged based on experience.

**3.3 Ultrasonic rinsing (Note: for no washing process of ultrasonic cleaning equipment, this part can be skipped.)**

- (1) After the cleaning is completed, the washing basket is moved into the rinsing tank for rinsing. Both ultrasonic rinsing and immersion rinsing are available.
- (2) Rinse with DI water at room temperature.
- (3) The rinsing time can be adjusted according to the number of workpieces, and the general time is 1-3 min.

**3.4 Drying**

The drying process can be dried by natural drying, fan drying, drying and compressed air air drying. The specific drying method and drying time can be selected according to the production conditions and actual use conditions.

- (1) After the completion of the rinsing process, the workpiece can be air-dried by compressed air, and the drying time is generally 5-10 min.
- (2) For the ultrasonic cleaning process without the rinsing process, after the cleaning is completed, the cleaning member may be taken out, rinsed with water, and then dried; or the residual liquid on the surface of the workpiece may be directly wiped off with a non-woven fabric.

**4. Cleaning effect**

图 4 链爪清洗

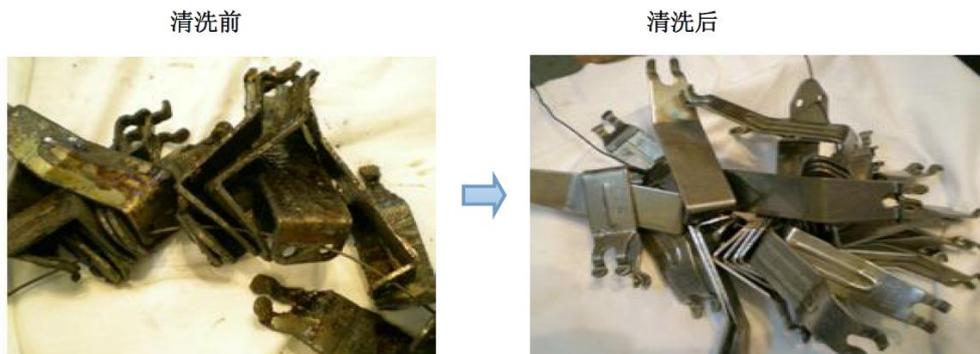


图 5 玻纤治具

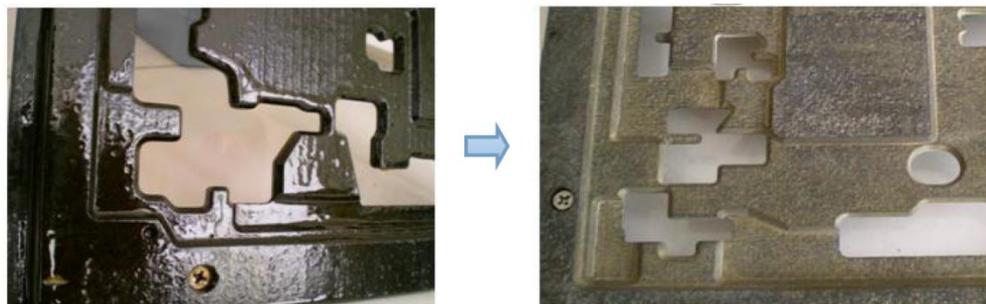
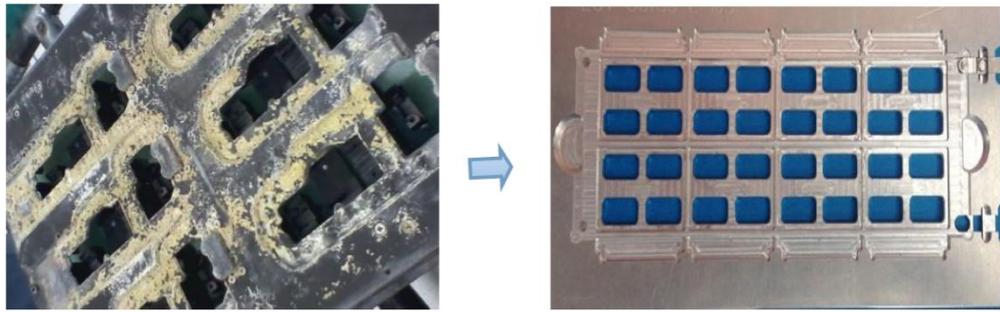


图 6 铝治具



### ▲ Soaking and manual cleaning methods

Manual cleaning means spraying the cleaning solution on the surface of the workpiece, or after immersing the workpiece in the cleaning solution, and then manually wiping it. Or brush. For the cleaning and maintenance of equipment, manual cleaning is a common cleaning method, and the operation process is very simple. Equipment requirements are relatively low. The notes are as follows:

- (1) For detachable parts (such as chain claws, jigs, fixtures, etc.), rinse with DI water and then dry naturally, or use other methods for drying;
- (2) For non-removable parts (such as furnace wall, pipe installation, etc.), spray the cleaning agent on the surface of the equipment for 1-2min, wipe it with a damp cloth, remove the dirt layer completely, and then dry the surface with a dry cloth.
- (3) JF8740 is an alkaline water-based cleaning agent. When hand cleaning, be sure to wear acid and alkali resistant gloves and overalls, and wear protective glasses to prevent splashing of the cleaning solution to the skin or other body parts.

### ▲ Spray cleaning process

The spray cleaning uses a 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. It is suitable for cleaning fixtures of various materials such as synthetic stone, reflow oven fittings, wave soldering chains, and claws to maintain cleaning parts.

1. Process schematic diagram (visible in Figure 1, Figure 2)



Pic.7 Tool spray cleaning



pic.8 Put the fixture into the cleaning basket in batches.

**2.Process application parameters**

project	Spray cleaning	Spray rinsing	drying
medium	JF8740	deionized water	Wind cutting
temperature	Normal temperature	Normal temperature	Normal temperature
Cleaning time	5-10min	3-5min	> 5min

**3. technological process**

**Add liquid → Feeding → Spray cleaning → High pressure air cutting → Spray rinsing → Hot air drying → Cutting**

**4. Precautions in the specific operation process**

**4.1 Add liquid**

- (1) JF8740 is an alkaline water-based cleaner. Wear protective equipment during the addition process to avoid skin contact or splashing into the eyes.
- (2) There is a certain amount of cleaning fluid loss during the cycle cleaning process. When the cleaning fluid in the storage tank is lower than the minimum liquid level line, it needs to be replenished in time.

**4.2 cleaning**

- (1) Spray cleaning method is mainly divided into rotary type and conveyor chain type. The spray cleaning machine is generally rotary type, the workpiece is subjected to high pressure spray cleaning in the rotating basket, and the spray pressure is adjustable, 720 degrees. Spray, clean without dead ends;
- (2) The cleaning time can be adjusted according to the type and state of the dirt. The ideal cleaning time is generally controlled at 5-10min.
- (3) It can be cleaned at normal temperature. The temperature of the cleaning fluid will rise due to the heat generated during the cleaning process. The higher the temperature of the cleaning solution, the stronger the cleaning power, but the excessive temperature will have a negative impact on the cleaning of the workpiece. It is recommended that the cleaning temperature be controlled at 20-50 ° C.

**4.3 rinsing and drying**

If the equipment has the function of rinsing and drying, please refer to the following process and parameters. If the equipment has no rinsing and drying function configuration, the ultrasonic cleaning method can be used in the same way: after the cleaning is completed, the cleaning parts can be taken out and rinsed with water. Then dry; or directly wipe off the residual liquid on the surface of the workpiece with a non-woven fabric.

- (1) Rinsing is generally carried out using deionized water and rinsing at room temperature for 3-5 minutes.
- (2) Drying is performed by fan hot air drying. The drying temperature can be preset by PLC. The drying temperature can be generally controlled at 100-120 ° C, and the drying time is generally 10-20 min. The drying temperature and time can be adjusted according to the specific production cycle and needs.
- (3) After cleaning, the surface of the workpiece is dry and has high cleanliness. It can be directly used in the later stage process, and the effect of manual cleaning is greatly improved.

## Environmental, health and safety regulations

- ▲ JF8740 is an alkaline water-based cleaner
- ▲ Halogen and VOC components are not included in the formulation.
- ▲ Safe to use, no burning.
- ▲ Refer to the MSDS specific precautions and handling instructions.

## Packing

- ▲ Packing: plastic bucket, 20KG/barrel.
- ▲ Storage: Store at room temperature and avoid direct sunlight and high temperature. The temperature is usually between 0-40 ° C.
- ▲ Shelf life: one year (sealed), the production date is detailed in the packaging.

## Precautions

- ▲ At the beginning of the introduction of the cleaning agent, the user should try to judge the compatibility between the cleaning agent and the cleaning equipment and the object to be cleaned, so as not to affect the service life of the material.
- ▲ The operating site should have ventilation equipment to keep the air circulation in the workplace.
- ▲ Wear protective gloves when handling to avoid contact with the skin. If you accidentally touch the skin, rinse immediately with plenty of water. If you accidentally splash into your eyes, rinse with plenty of water and consult a doctor as soon as possible.
- ▲ Do not swallow, do not store in a range that children may reach.