

## Applying New Food Grade Adhesives F-3 Procedure



Thank you for purchasing a Hisaka Plate Heat Exchanger.

- The new food grade adhesive F-3 is composed of materials that comply with the Positive-List-System.

Since this instruction manual only describes the precautions and application methods for using F-3, please refer to **“3 Gasketing Manual (10 series in total)”** posted on our website about the attachment position on the plate.

- Please ensure to read and understand this instruction manual in order to perform safe and proper operation and maintenance.
- Please keep this instruction manual and specification documents on hand for reference at any time.
- All description details, including appearance and specifications, presented in this instruction manual are subject to change for improvement without prior notice.

For the latest information, please refer to our website, if necessary.

# HISAKA PLATE HEAT EXCHANGER

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## 1 Introduction

This instruction shows the process of attaching gasket to plate by using the new food grade adhesive F-3 for Plate Heat Exchanger (hereinafter referred to as PHE). The purpose is to ensure quality by indicating construction guidelines and management precautions.

### Features and precautions of new food grade adhesive F-3

Point 1 : This adhesive **conforms to the new Food Sanitation Act** that came into effect in June 2020.

Composed of materials that comply with the Positive-List-System.

Point 2 : No organic solvents which being harmful to human health are used (because water is used as solvent).

Point 3 : Two types of bottles, 100ml and 500ml, are available.

Note 1 : **Dissolves in alcohol.**

Note 2 : Please strictly follow the instruction of 4 hours or longer drying time.

Note 3 : Please refrigerate after opening, because water is used as solvent.

## 2 How to apply new food grade adhesive F-3

### Step 1 : Transfer adhesive to the designated oiler

Please transfer the adhesive F-3 to the designated oiler before using. (Due to the low viscosity of the adhesive, the bore of the oiler to be 0.5 mm.) Adhesive transfer will be smoother with using a funnel.



Photo 1. Designated oiler



Photo 2. funnel

### Step 2 : Application procedure

Note that the viscosity of the new food grade adhesive F-3 is low, excess volume being applied, the adhesive will overflow while the gasket is attached.

Please refer to Photo 3 for the maximum amount to be applied, with approximate 1.0mm width, on the gasketing line. If adhesive overflows after installing the gasket, as shown in Photo 4, please dissolve the adhesive with alcohol and wipe it off with a cloth.



Photo 3. Maximum amount of adhesive

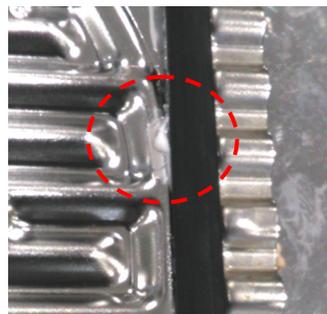


Photo 4. Adhesive overflowing

### Step 3 : Drying time

Please strictly follow the instruction of 4 hours or longer drying time. It is recommended that drying overnight before moving on to the next process. Compared to organic solvent-based adhesives, it takes longer to dry because the solvent to be water.

## 3 Precautions

### • Application to alcoholic fluids

The new food grade adhesive F-3 is dissoluble in alcohol. If the fluid contains alcohol components, please ensure to read and understand the following matter of concerns, and follow the precautions.

#### Matter of concerns

The overflow adhesive may be dissolved by the alcohol in the fluid and elute into the fluid.

#### Precautions

Be sure to wipe off any adhesive that overflows as described on page 2, step 2 of this procedure.

### • How to store/Expiration date

The new food grade adhesive F-3 does not contain any preservative. **Please refrigerate after opening and use within one month as a guideline.**

For the expiration date of the unopened bottle, please check the date printed on bottle container.

## 4 Contact information

Contact info for inquiries

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**[NOTE]**

- Please inform us the "MFG. Number" and "Model" described on the nameplate or Plate Arrangement Drawing and Assembly Drawing.

- For more information

Hisaka Works, Ltd. official homepage (<http://www.hisaka.co.jp/english/>).



# HISAKA WORKS, LTD. HEAT EXCHANGER DIVISION

Hisaka Works, Ltd., Heat Exchanger Division acquires both ISO9001 and ISO14001 certification.

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