



# AlfaPhos

## Cleaning agent for heat exchangers

A problem frequently encountered in almost all applications is the build-up of deposits on heat transfer surfaces. Alfa Laval supplies a wide range of cleaning agents suitable for removing most of these troublesome deposits. These cleaning agents have been specifically developed for use in heat exchangers. The time-consuming work of opening plate heat exchangers can thus often be avoided by using an Alfa Laval Cleaning in Place (CIP) unit.

All Alfa Laval cleaning agents have been tested in Alfa Laval's own laboratories. Provided the recommended instructions are adhered to, Alfa Laval guarantees that these cleaning agents do not damage plates, gaskets or glue.

### Concept

An Alfa Laval CIP unit is connected to the heat exchanger, and AlfaPhos is mixed with water in the CIP unit. This mixture is then heated, and circulated through the heat exchanger, which is cleaned within a couple of hours.

AlfaPhos is an acidic cleaning liquid with a phosphoric acid base. It is specifically designed for the removal of metallic oxides, rust, calcium carbonate and other inorganic scale.

AlfaNeutra can be used for the neutralization of used AlfaPhos prior to disposal.

### Features and benefits

- AlfaPhos is environmentally friendly, and is easily biodegradable.
- Tested in Alfa Laval's own laboratories, which means that Alfa Laval guarantees that plates, gaskets or glue are not damaged.
- Can be used in combination with AlfaAdd, which provides even better cleaning results on oily and fatty surfaces and where biological growth occurs. AlfaAdd also reduces any foaming.
- AlfaPhos inhibit the corrosion (passivation) of metal surfaces in heat exchangers and related equipment.



### Instructions for use

The normal mixing ratio for calcium carbonate and other inorganic scale is 1 part AlfaPhos to 9 parts of water.\* \*\*

The normal mixing ratio for metallic oxides and rust is 1 part AlfaPhos to 4 parts of water.\* \*\*

The recommended cleaning temperature is 50–70°C (122–158°F).

The recommended cleaning time is 2–6 hours.\*\*\*

AlfaPhos can be mixed with AlfaAdd (0.5–1 vol% to total diluted solution) to provide better cleaning results on oily and fatty surfaces and where biological growth occurs. AlfaAdd also reduces any foaming.

AlfaNeutra is used after cleaning is completed in order to neutralize the solution to be disposed of. AlfaNeutra is added until the pH level of the disposal solution reaches 6–8.\*\*\*\*

\* Water must be added first.

\*\* The pH level must never be more than 2.5 during the cleaning process. To lower the pH level, more AlfaPhos must be added to the solution.

\*\*\* Depends on the amount of fouling present in the heat exchanger, the size of the heat exchanger, the cleaning temperature and the concentration of the cleaning liquid.

\*\*\*\* There is a risk of chemical precipitation in the tank if neutralization is carried out too rapidly, or if too much AlfaNeutra is used.

### Ordering Information

Supplied in a red 25 litre or a blue 200 litre (6.5 or 52.5 US gallons) plastic container or in a white 1000 litre container.

Art. no. 31801-2612-5      31 kg (~20 l)

Art. no. 31801-2617-1      312 kg (~200 l)

Art. no. 31801-2619-2      1560 kg (~1000 l)

### Technical specification (physical and chemical properties)

Physical state	Liquid
Colour	Clear, colourless
Odour	Odourless
pH	1.5 ± 0.5
Density at 20°C (g/ml)	1.55 ± 0.05
Storability	1 year in closed, original containers (0–40°C)

### How to contact Alfa Laval

Contact details for all countries are continually updated on our web site. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.