



# Heat exchanger detergents

## → CARLYCLEAN

04/11



Refrigerating and air conditioning systems' heat exchangers are environments that are subject to heat transfer. Any cleaning, grease, dust, corrosion and even bacterium and other micro-organisms act as isolation barriers and contribute to disturbing the exchangers' efficiency.

The air condenser installed outside is directly exposed to these undesirable soils.

In an air conditioning system, all particles (dust, greases, fumes) that are sufficiently small to go through the evaporator filter, accumulate on the fins which are generally wet and make up an ideal environment for bacteria and micro-organism development.

An efficient and harmless cleaning of exchangers is hence a priority in order to preserve their efficiency, increase their service life and maintain a healthy environment for the users.

Suitable for products in contact with food (*compliant with order of 08/09/1999*).

### ■ Applications

- CARLYCLEAN is a concentrated alkaline detergent formula (non acid, non aggressive) to clean and degrease the soils of synthetic, vegetal and mineral origin deposited on the exchangers: condensers and evaporators.
- This product is a surface active formulation composed of active non acid, non toxic and easily biodegradable substances.
- The judicious association of CARLYCLEAN's chemical components allows the elimination of soils by emulsion. This process is an efficient technique that only acts on the soils, without altering the fragile surfaces, such as aluminium fins or other nearby

materials.

- Cleaning greasy deposits by emulsion is also healthier for the user and for the environment than some acid and caustic detergents, based on strong chemical interaction formations on the exchangers to degrease them or to remove the microbic flora.

### ■ Functional features

- CARLYCLEAN is efficient against:
  - mineral greases (oils, sludge...);
  - vegetal greases (grass, leaves...);
  - proteinic and keratinous derivatives (feathers...);
  - glucidic derivatives;
  - mineral soils (lime or silica dust...).
- Keeping exchangers clean ensures better equipment reliability and efficiency.
- CARLYCLEAN using temperature: between +5°C and + 60°C.

### ■ CARLY advantages

- CARLYCLEAN is compliant with the legislation on the cleaning of foodstuff containers (order of 08/09/1999). For surfaces in contact with foodstuff, a rinse with drinkable water is required.
- CARLYCLEAN can be diluted.
- Note: once the fins are perfectly cleaned-up, further anti-microbial treatment with CARLYBIO is recommended for the evaporators: CARLYBIO is efficient against bacteria (EN 1276), fungicides (EN 1650) and Legionella (NFT 72,301). Efficiency reports are available upon request.
- Deodorising product.



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### ■ Directions for use

- Considering the multiplicity of soils accumulated on the exchangers, the concentration of CARLYCLEAN can be extremely variable: the detergent can be used pure or diluted (dilution up to 10%: 9 volumes of water for a volume of CARLYCLEAN).
  - For condensers: for maximum efficiency, it is recommended to perform a pulverisation on the soiled parts, to let the product act for at least 5 minutes, then to rinse with water.
  - For evaporators: CARLYCLEAN can be diluted in 5 to 9 volumes of water. Rinsing is not mandatory (de-icing is enough to swill out the fins).

### ■ Chemical features

#### • Chemical compositions:

- anionic surface-active agents;
- solvents (< 5%);
- mineral salts;
- water.

CARLYCLEAN associates the most detergent surface-active agent with the most emulsifying surface active agent. Thus its wetting and sequestering power makes it possible to easily reach, remove and eliminate the soils encountered.

The solvent used brings synergy to the level of cleaning.

Mineral salts (silicates, phosphates), with their anti-corrosive properties, are easily absorbed on the sensitive surfaces to be protected such as aluminium and its alloys, copper, zinc and tin.

CARLYCLEAN's chemical composition allows compatibility with all materials used in the manufacturing of exchangers (aluminium, copper...) and with the fin protection compounds (varnish, tinning...).

CARLYCLEAN is efficient and without danger on condensers and finned type evaporators.

### ■ Precautions for use

- \* Like all highly degreasing products, it is recommended wearing gloves and glasses when using the product.
- \* Do not spray onto energized electrical equipment.
- \* In the case of contact with eyes, rinse copiously with water.
- \* Do not swallow.
- \* R36/38 Irritant for eyes and skin.
- \* S2 Keep away from children.
- \* S24/25 Avoid excessive contact with skin and eyes.
- \* S35 This material and its container must be disposed of in a safe way.
- \* S37 Wear suitable gloves.
- \* S46 If swallowed, seek medical advice immediately and show this container or label.
- \* Xi: Irritant.
- \* **Regulation:** For surfaces in contact with foodstuff, a rinse with drinkable water is required (Order of 08/09/1999). The enforced regulation is that of the country where the product is used.
- \* **Frequency of use:** in order to obtain an efficient heat exchange, it is recommended to clean-up the exchangers on a monthly basis.
- \* **Storage conditions:** Keep the product at temperatures between +5°C and +40°C.
- \* To make the CARLYCLEAN use even easier, CARLY proposes a pump with a pressure of 5 L, or CARLYSPRAY(refer to chapter 100).

### ■ Technical features

CARLY references	Volume (Litres)	Packaging
<b>CARLYCLEAN 500</b>	0,5	Atomiser
<b>CARLYCLEAN 5000</b>	5,0	Can
<b>CARLYCLEAN 25000</b>	25,0	Can



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### ■ Weights and packaging

CARLY references	Unit weight (kg)	Packaging unit
<b>CARLYCLEAN 500</b>	0,56	15
<b>CARLYCLEAN 5000</b>	5,25	2
<b>CARLYCLEAN 25000</b>	26,00	1