



Document number 2612-5-ENG-01	First issued 2002-09-18	Revised date	Revision	Issued by Staffan Königsson	Page 1 of 6
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AlfaPhos

1. Product and Company identification

Trade Name: AlfaPhos	Supplier: ALFA LAVAL AB Box 74	Manufacturer: Henkel Norden AB Box 339
Product Type: Cleaning agent for heat exchangers	SE-221 00 Lund Sweden Tel: +46 46 36 65 00	SE-431 24 Mölndal Sweden

Emergency number: +46 31 771 94 50

2. Composition and Information on the Components

Contains phosphoric acid.
Certain ingredients are classified under current regulations on the basis of health effects, physico-chemical properties or environmental effects and are present at concentrations above the exemption limits. These are as follows:

Hazardous ingredient	Weight-%	CAS No	Classification	Risk Phrases
Phosphoric acid	>50	7664-38-2	C	R34
R34	Causes burns			

3. Hazard Identification

Acid mixture which is corrosive to all parts of the body.

AlfaPhos

4. First Aid Measurements

First aid – Skin contact	Remove contaminated clothing immediately. Drench the affected area with water and continue thorough washing with soap and water. Get medical attention. Contaminated clothing must be laundered before re-use.
First aid – Eye contact	Flush eyes with large quantities of cool water holding eyelids apart. Continue irrigation for at least 10 minutes. GET MEDICAL ATTENTION IMMEDIATELY
First aid – If Swallowed	Rinse mouth with water. Provided the patient is conscious, give several glasses of water to drink with Milk of Magnesia if available. DO NOT INDUCE VOMITING GET MEDICAL ATTENTION IMMEDIATELY Never give anything by mouth to an unconscious person.
First aid – Inhalation	Inhalation is only likely to occur if the product enters the atmosphere as a spray mist. However, if inhalation should occur proceed as follows: Move to fresh air, Keep affected person warm and rested, Get medical attention if discomfort persists.

5. Fire Fighting Measurements

Extinguishing media	Use water or water spray for fire fighting.
Special hazards of product	Non flammable. If involved in a fire, toxic fumes may be given off.
Protective equipment for fire fighting	Firefighters should wear self-contained breathing apparatus. All other persons in the vicinity should be evacuated.

6. Accidental Release Measures

Personal precautions	Wear the protective clothing detailed in Section 8 and clear the area immediately of all personnel not so protected.
Spillage	Water can be used if the washings will go to drains connected to an effluent system with facilities for neutralising acids. Use as large a quantity of water as possible. Alternatively, the spillage should be ringed with hydrated lime or soda ash and gradually soaked up with further neutralising agent, sand or earth. Collect solid residues and place in polythene bags; refer to a specialist waste contractor for safe disposal. Any small residues should be hosed to drain with plenty of water, but note that before discharge, the effluent may need to be treated so that it is within Water Authority consent limits. If a significant quantity of the product enters public sewers, surface water drains or watercourses, inform the appropriate water authority or national regulatory body immediately.

AlfaPhos

7. Handling and Storage

Handling	Avoid all contact with skin and eyes. When handling, follow good industrial hygiene practices. Handle only in conditions of good ventilation. Wear the personal protective equipment (PPE) specified in Section 8.
Storage	Store in a cool, dry, well ventilated area away from foodstuffs. Store away from alkalis.

8. Exposure Control / Personal Protection

The product contains hazardous ingredients. The Occupational Exposure Limits (OEL) quoted in EH40, or by the manufacturers/suppliers are as follows:

Substance	LTEL			STEL		Notes
	% wt/wt	8 hr ppm	TWA* mg/cu.m	15min ppm	Ref** mg/cu.m	

Phosphoric acid	>50	-	-	-	2	A
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* Long term exposure limit - 8 hour time weighted average reference period.

** Short term exposure limit - 15 minute reference period.

Notes: A - Approved Occupational Exposure Standard.

Respiratory protection	Environmental controls must be adequate to maintain atmospheric concentration below the OEL at all times, otherwise respiratory protection must be worn.
Hand protection	When handling the product wear PVC gloves.
Eye protection	Wear chemical goggles and/or a face shield.
Other	Safety showers and eye wash stations should be provided.

9. Physical and Chemical Properties

Appearance	Colourless to straw coloured liquid
Odour	None
Specific Gravity	1.5-1.6
Solubility in water	Completely miscible
pH of 1% solution	1-2
Flammability	Non-flammable
Oxidising Properties	None

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10. Stability and Reactivity

Stability	Stable at ambient temperature.
Materials to avoid	Reacts vigorously with alkalis. Will attack zinc and its alloys with possible liberation of flammable hydrogen gas. Strong heating may yield toxic decomposition products.

11. Toxicological Information

Strongly acid product which may cause chemical burns and ulcerations if skin contact is prolonged or treatment is delayed.
Phosphoric acid is corrosive and irritant to eyes, skin and mucous membranes. It is moderately toxic to humans by ingestion. Oral-rat LD50 : 1530 mg/kg.

12. Eco-toxicological Information

Non-selectively toxic to plants.
Constituents of this product present a serious threat to fish and other aquatic life.
The product contains phosphates which may act as a plant nutrient, promote algal growth and degrade water quality.
The product should not be allowed to enter surface water drains, natural watercourses or soil.
Before discharge to drain, the working solution containing this product may need to be treated so that the effluent is within Water Authority consent limits.
With proper use and disposal of this product, no adverse environmental effects are expected.

13. Disposal

Disposal of product:	All national and local legislation concerning the disposal of waste material must be complied with. Dispose of unrequired product through a registered waste disposal contractor.
Disposal of containers:	Empty but uncleaned containers must be disposed of as hazardous waste.
Disposal of used product:	Spent solutions and process sludge are best disposed of by a registered waste disposal contractor. The disposal and deposit of waste is controlled by the Environmental Protection Act 1990. The Regulations and Guidance given under this Act must be observed.

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14. Transport Information

Conveyance Classification:	Corrosive
SI (UN) Number:	1805
Proper Shipping Name:	Phosphoric acid
Packing Group:	III
ADR Classification:	8, III
Emergency Action Code:	2R
Hazard Identification Number:	80
CEFIC Trem Card:	80G01
IMDG Classification:	Class 8, Page 8204
Emergency Schedule (EmS) Number:	8-08
MFAG Table Number:	700

15. Regulatory Information

Hazard Classification/Label	
Classification:	Corrosive
Label Symbol(s):	C
Named Substance(s):	Phosphoric acid (>50%)
Risk Phrases:	R34
Safety Phrases:	S26, S28, S36/37/39, S45
R34:	Causes burns
S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28:	After contact with skin, wash immediately with plenty of water.
S36/37/39:	Wear suitable protective clothing, gloves and eye/face protection.
S45:	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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16. Other Information

This Data Sheet has been written in accordance with Directives 88/379/EEC, 93/112/EC and The Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 [CHIP 2 Regulations] as amended.

Reference Sources:

EH40 Occupational Exposure Limits - published annually by UK Health & Safety Executive.

Sax's Dangerous Properties of Industrial Materials, 8th edition.

Sigma-Aldrich Library of Chemical Safety Data, 2nd edition.

Material Safety Data Sheets from relevant manufacturers or suppliers.

This Safety Data Sheet does not constitute a workplace risk assessment.

All information is given in good faith but users must satisfy themselves that there are no circumstances requiring additional information or precautions or the verification of details given herein.

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