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KLEN 2102
Self Rinsing Chiller Coil Cleaner

Product Description
KLEN 2102 is a self-rinsing coil renovator that cleans and restores chiller coils and fins to maximum cooling capacity through natural condensation. It is non-corrosive and does not harm chiller coil and fins, thus cutting down expensive repair costs and prolonging equipment life. ***KLEN 2102*** is non-flammable and does not produce toxic vapour and causes no health or fire hazards. ***KLEN 2102*** can also be used as a filter cleaning or filter coating.

Areas of Use
KLEN 2102 can be used for air-conditioning service and in workshops, food processing areas, storage plants and buildings with fan coil cooling systems. It can also be used as a filter cleaner or in concentration, used as a filter coating.

Special Features
- Self rinsing. Cleans chiller coil through natural condensation. Breaks up stain and atmospheric dirt bonded to chiller coil and fins and floats them down to condenser pan.
- Economical. Properly cleaned chiller coil increases cooling efficiency for minimum power
  consumption. Non-corrosive, thus leaves no harmful residue, eliminating frequent breakdowns or costly replacement.
- Safe. Non-flammable and does not contain any acid or special precaution to use or store.
- Gives off pleasant perfume when I use it.

Directions for Use
- Use as it is or dilute with half part of water. Pour water into sprayer container before ***KLEN 2102***.
- Switch off air-conditioner unit, spray directly from top onto cooling coil and fin area.
- Switch on air-conditioner unit, ***KLEN 2102*** will, through natural condensation, loosen dirty soil and float dirt onto condensation tray within minutes.
- Clean and coat filter. Dip filter into container to clean and rinse away ***KLEN 2102*** and dirty particles with water. Spray concentrated ***KLEN 2102*** on both sides of cleaned filter to form meshwork that traps tiny atmospheric particles from passing through filter.

Precautions
Avoid ingestion and eye contact. If in contact with eyes, flush with cool water for at least 15 minutes and consult a physician immediately. If ingested, do not induce vomiting, and dilute by drinking water and consult physician immediately. Upon contact with skin, wash with large amounts of soap and water and consult physician if irritation persists.

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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Identifier: KLEN 2102

Other means of identification: Self Rinsing Chiller Coil Cleaner

Date of SDS: 01 January 2024

Recommended use and restriction on use:
KLEN 2102 can be used for air-conditioning service and in workshops, food processing areas, storage plants and buildings with fan coil cooling systems. It can also be used as a filter cleaner or in concentration, used as a filter coating.

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SECTION 2 - HAZARDS IDENTIFICATION

GHS classification: Acute toxicity: Oral: Category 4;
Skin irritation: Category 2; Eye irritation: Category 2

GHS label elements: Pictogram: Signal word: Warning

Hazard statements: H320: Causes eye irritation.
Precaution statements: P102: Keep out of reach of children.
P233: Keep container tightly closed.
P262: Do not get in eyes.

SECTION 3 - COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Identification	Component & Composition	Chemical Formula	CAS NO.	EC NO.
Tetrapotassium Pyrophosphate	< 4.0 %	K4O7P4	7320-34-5	230-785-7
Alkyl Diamine Oxide	< 2.0 %	$C_{15}H_{33}NO$	70592-80-2	274-687-2
Nonyl Phenol Ethoxylate	< 2.0 %	$C_{33}H_{60}O_{10}$	26571-11-9	247-816-5
Dipropylene Glycol Monomethyl Ether	< 2.0 %	CH3O[CH2CH(CH3)O]2H	34590-94-8	252-104-2
Hydroxyethyl Cellulose	< 1.0 %	$C_2H_6O_2 \cdot x$	9004-62-0	618-387-5
Water	> 85.0 %	H_2O	7732-18-5	231-791-2
Fragrance	< 0.2 %	Mixture	NA	NA
Red Dye	< 0.01 %	CI 14720	3567-69-9	222-657-4

SECTION 4 – FIRST AID MEASURES

Inhalation: Move to area of fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered if available. Call a physician. Never give anything by mouth to an unconscious person.

Skin contact: Wash with large amounts of soap and water. If irritation persists, consult a physician.

Eye contact: Flush with cool water for at least 15 minutes. Then consult a physician immediately.

Ingestion: Induce vomiting. Dilute by drinking water. Call a physician immediately.

Notes to Physicians: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable fire-extinguishing media: Water, dry chemical, carbon dioxide and foam.

Specific hazards arising from the chemical: Burning can produce carbon dioxide, carbon monoxide.

Special protective actions for fire fighters: Fire fighters may be exposed to the products of combustion should wear a self-contained breathing apparatus with full protective equipment.

SECTION 6 - ACCIDENTIAL RELEASE MEASURE

Personal precautions, protective equipment, and emergency measures:
Use proper protective equipment (chemical protection suit, gloves, goggles, mask, etc).

Environmental precautions: Chemical substances should not be released into the environment (water, soil).

Methods and materials for containment and cleaning up: Safely stop discharge. Contain material, as necessary, with dike or barrier. Stop material from contaminating soil or from entering sewers or bodies of water. Cover spills with absorbent clay, sawdust or inert material and placed in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations

SECTION 7 - HANDLING AND STORAGE

Precaution for safe handling: Wash thoroughly after handling, especially before eating and drinking, Wash contaminated goggles, face-shields, and gloves. Launder contaminated clothing before re-using.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated area at room temperature. Keep away from any possible source of ignition. Store away from any oxidizing materials.
Do not re-use empty containers for food, clothing or products for human or animal consumption or where skin contact can occur

SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control parameters/ Occupational exposure limits: **ACGIH - TLV:** Provide suitable personal protective equipment and/or ventilation to maintain exposure below TLV levels.

Appropriate engineering control measures: Normal ventilation is sufficient.

Personal Protection: Use the protective equipment such as rubber/PVC gloves; protective glasses if splashing is anticipated.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odour:	Clear red liquid with pleasant scent.
Solubility in water:	Complete.
Boiling Point:	100 ^{0} C
Specific Gravity:	1.030 +/- 0.005 g/cm^3
PH:	10.0 +/- 0.3
Flash Point (T.C.C.):	None to boiling **Flammable Limits - Upper:** Not applicable **Lower:** Not applicable
Vapour Pressure:	Not determined
Vapour Density:	Not determined

SECTION 10 - STABILITY AND REACTIVITY

Reactivity/ In compatible materials: Strong acids & oxidizers. Chlorinated detergents and sanitizers.

Chemical stability: Stable under normal temperature and pressure.

Possibility of hazardous reaction: Will not occur.

Condition to avoid: Not applicable

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute toxicity: This product has low levels of toxicity.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity: Concentrations with a pH value of 10.5 or greater, especially in fresh water, may be fatal to fish and other aquatic organisms. It can cause damage to aquatic plants and vegetation.

Persistence and degradability: Product degrades readily by reaction of carbon dioxide in the air as well as decomposition by microorganism.

Bioaccumulative potential: It is soluble in water and does not bio-accumulate.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal method: Dispose of in an approved waste facility according to local regulations. It is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) Re-cycle or rework if feasible (2) Incinerate at an authorized facility (3) Treat at an acceptable waste treatment facility.

SECTION 14 – TRANSPORT INFORMATION

This material is non-regulated and no special requirement is necessary.

HS Code: 34024100

SECTION 15 – REGULATORY INFORMATION

International regulation:

Classification:	This product is not classified.	
Risk phrases:	R36	Irritating to eyes.
Safety phrases:	S02	Keep out of reach of children.
	S07	Keep container tightly closed.
	S25	Avoid contact with eyes.

SECTION 16 – OTHER INFORMATION

Hazard Rating: HMIS (Hazardous Materials Information System)
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0
0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme

NOTICE: SDS is correct at date of publication. It is not necessarily fully adequate for every circumstance, nor to be confused with or followed in violation of applicable laws or insurance requirements. Health hazards and effects of over-exposure apply only to negligent handling or misuse of product in its concentrated form (as supplied); and not routine exposure to diluted product under normal use. No warranty, express or implied, of merchantability, fitness or accuracy of data is made; as such the vendor assumes no responsibility for injury or damages resulting from use of this product.