

SECTION 1 Identification

1.1. GHS Product identifier

Product form : Mixture
Product name : Liquid Ice Machine Cleaner
Product code : 4207-08, 4207-47, 4834-C7, 4834-08

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Cleaning scale from ice machines

1.4. Supplier's details

Manufacturer

Nu-Calgon
2611 Schuetz Road
St. Louis, MO
63043
US
T 314-469-7000 / 800-554-5499
www.nucalgon.com

1.5. Emergency phone number

Emergency number : 1-800-424-9300 (CHEMTREC)

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA/US)

Corrosive to metals, Category 1	May be corrosive to metals.
Skin corrosion/irritation, Category 1	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	Causes serious eye damage.
Health hazards not otherwise classified, Category 1	Causes severe damage to the respiratory tract.

2.2. GHS label elements, including precautionary statements

GHS CA/US labeling

Hazard pictograms (GHS CA/US) :



Signal word (GHS CA/US) :

Danger

Hazard statements (GHS CA/US) :

: May be corrosive to metals
Causes severe skin burns and eye damage
Causes severe damage to the respiratory tract

Precautionary statements (GHS CA/US) :

: Keep only in original packaging.
Do not breathe vapors, mist.
Wash hands, forearms and face thoroughly after handling.
Wear protective gloves, protective clothing, eye protection, face protection, and hearing

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According to SOR/2015-17, Hazardous Products Regulations (HPR) (amended 2022) & According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS) (amended 2024)

protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or a doctor.

Specific treatment (see supplemental first aid instruction on this label).

Absorb spillage to prevent material-damage.

Store locked up.

Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%
Phosphoric acid	phosphoric acid ... %, orthophosphoric acid ... %	CAS-No.: 7664-38-2	60 - 80

Comments : CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with the amended HPR as of December 2022.
US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.

First-aid measures after skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor. If vomiting occurs have person lean forward. Never give anything by mouth to an unconscious person.

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Medical personnel should be made aware of substance(s) involved and take measures for self protection. Show this safety data sheet to the doctor in attendance. Avoid contact with skin and eyes. Keep out of the reach of children.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Causes severe damage to the respiratory tract.
Symptoms/effects after skin contact : Causes severe skin burns. May produce skin irritation, blistering, ulcers, and deep scarring.

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- Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
- Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

- Other medical advice or treatment : Treat symptomatically. Symptoms may be delayed.

SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

- Suitable extinguishing media : Treat for surrounding material.
- Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Specific hazards arising from the chemical

- Fire hazard : During fire, gases hazardous to health may be formed. In case of fire or explosion do not breathe fumes.
- Explosion hazard : No direct explosion hazard.
- Hazardous decomposition products in case of fire : May include and are not limited to: oxides of carbon. Hydrogen gas.

5.3. Special protective actions for fire-fighters

- Firefighting instructions : In case of fire: Stop leak if safe to do so. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : In the event of a significant spillage : Notify authorities if product enters sewers or public waters. Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
- Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

- For containment : Stop leaks if it can be done without personal risk. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Clean contaminated surfaces with an excess of water.
- Other information : Dispose of materials or solid residues at an authorized site. This material and its container must be disposed of in a safe way, and as per local legislation.

For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist. Wear personal protective equipment. Do not taste or swallow. Ensure good ventilation of the work station. Handle and open container with care.

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Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.
Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Store in a closed container. Keep out of reach of children. Store tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store locked up.

Incompatible materials : Metals.

Storage area : Store away from heat.

Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Phosphoric acid (7664-38-2)	
Canada (Alberta) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Notations and remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
VECD (OEL STEV)	3 mg/m ³
VEMP (OEL TWAEV)	1 mg/m ³
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Notations and remarks	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Notations and remarks	URT, eye, & skin irr
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³

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Phosphoric acid (7664-38-2)	
Notations and remarks	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Notations and remarks	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
OEL TWAEV	1 mg/m ³
	3 mg/m ³
Regulatory reference	Ontario Occupational Exposure Limits under Regulation 833
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Notations and remarks	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10
Canada (Yukon) - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
OEL STEL	3 mg/m ³
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	1 mg/m ³
ACGIH® TLV® STEL	3 mg/m ³
Remark (ACGIH®)	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025

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Phosphoric acid (7664-38-2)	
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA	1 mg/m ³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Wear safety glasses with side shields (or goggles).

Skin and body protection:

Wear appropriate chemical resistant clothing.

Respiratory protection:

Use respiratory protection. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Color	: Colourless
Odor	: Odourless
Odor threshold	: No data available
pH	: < 1
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 500 °F (260 °C)

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Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 0.03 mm Hg
Relative vapor density at 20°C	: No data available
Relative density	: 1.584
Solubility	: Completely miscible.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive.
Oxidizing properties	: Not oxidising.
Explosion limits	: No data available
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

Reactivity	: Reacts vigorously with alkaline material or metals.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Keep away from heat and direct sunlight. Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals.
Incompatible materials	: Metals. Strong oxidizing agents. Reducing agents.
Hazardous decomposition products	: May include and are not limited to: oxides of carbon. Hydrogen gas.

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Phosphoric acid (7664-38-2)	
LD50 dermal rabbit	2740 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat	> 850 mg/m ³ (Exposure time: 1 h Source: NLM_CIP)
ATE CA (Dermal)	2740 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns. pH: < 1
Serious eye damage/irritation	: Causes serious eye damage. pH: < 1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Likely routes of exposure	: Skin and eye contact. Ingestion. Inhalation.
Symptoms/effects after inhalation	: Causes severe damage to the respiratory tract.
Symptoms/effects after skin contact	: Causes severe skin burns. May produce skin irritation, blistering, ulcers, and deep scarring.

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According to SOR/2015-17, Hazardous Products Regulations (HPR) (amended 2022) & According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS) (amended 2024)

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general : See below for route-specific details.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Phosphoric acid (7664-38-2)	
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

12.2. Persistence and degradability

Liquid Ice Machine Cleaner	
Persistence and degradability	Rapidly degradable

Phosphoric acid (7664-38-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Waste treatment methods : Dispose of the material collected according to regulations.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling, disposal or collection.

SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
14.1. UN Number			
UN1805	UN1805	1805	1805

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TDG	DOT	IMDG	IATA
14.2. UN Proper Shipping Name			
PHOSPHORIC ACID SOLUTION	Phosphoric acid solution	PHOSPHORIC ACID SOLUTION	Phosphoric acid, solution
Transport document description			
UN1805 PHOSPHORIC ACID SOLUTION, 8, III	UN1805 Phosphoric acid solution, 8, III	UN 1805 PHOSPHORIC ACID SOLUTION, 8, III	UN 1805 Phosphoric acid, solution, 8, III
14.3. Transport hazard class(es)			
LTD QTY	LTD QTY	LTD QTY	LTD QTY Y
14.4. Packing group, if applicable			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

TDG	
UN-No. (TDG)	: UN1805
Excepted quantities (TDG)	: E1
Emergency Response Guide (ERG) Number	: 154
DOT	
UN-No. (DOT)	: UN1805
DOT Special Provisions (49 CFR 172.102)	: A7 - Steel packaging must be corrosion-resistant or have protection against corrosion. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 53 - Stow "separated from" alkaline compounds, 58 - Stow "separated from" cyanides

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IMDG

Special provision (IMDG)	: 223
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG1, SG36, SG49
Properties and observations (IMDG)	: Miscible in water. Mildly corrosive to most metals.

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3, A803
ERG code (IATA)	: 8L

14.7. Transport in bulk according to Annex II of MARPOL 73/789(^9) and the IBC Code(^10)

Not applicable

SECTION 15 Regulatory information

All components of this product are present on DSL

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Phosphoric acid (7664-38-2)

CERCLA RQ	5000 lb
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California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Phosphoric acid(7664-38-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

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SECTION 16 Other Information

Issue date : 03/02/2026

Other information : For an updated SDS, please contact the supplier or manufacturer listed on the first page of the document.

Prepared by: Nu-Calgon Technical Service Phone: (314) 469-7000.

The information in the safety data sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.