

1. Product and Company Identification

Product identifier	Nickel-Safe Ice Machine Cleaner (4287-08, 4287-34)
Other means of identification	Not available
Recommended use	Cleaning scale from ice machines
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	Nu-Calgon
Address	2008 Altom Court St. Louis, MO 63146 United States
Telephone	314-469-7000 / 800-554-5499
E-mail	info@nucalgon.com
Emergency phone number	1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	May be corrosive to metals. Causes skin irritation. Causes serious eye damage.
Precautionary statement	
Prevention	Wear eye/face protection. Wear protective gloves. Wash thoroughly after handling. Keep only in original container.
Response	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/doctor. If on skin: Wash with plenty of water. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Absorb spillage to prevent material damage.
Storage	Store in corrosive resistant container with a resistant inner liner.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Phosphoric acid		7664-38-2	27.38
Citric Acid		77-92-9	4

4. First Aid Measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
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/doctor.
Ingestion	If swallowed, DO NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Suitable extinguishing media	Dry chemical powder. Foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>This product is miscible in water. Stop the flow of material, if this is without risk. Should not be released into the environment.</p> <p>Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p>
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.
Conditions for safe storage, including any incompatibilities	Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	PEL	1 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m ³
	TWA	1 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m ³
	TWA	1 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

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. Eye wash facilities and emergency shower must be available when handling this product. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles are recommended.

Skin protection

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Not normally required if good ventilation is maintained.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Liquid
Physical state	Liquid.
Form	Liquid.
Color	Green
Odor	Mild chemical
Odor threshold	Not available.
pH	< 1
Melting point/freezing point	-0.4 °F (-18 °C)
Initial boiling point and boiling range	> 199.4 °F (> 93 °C)
Pour point	Not available.
Specific gravity	1.19
Partition coefficient (n-octanol/water)	Not available
Flash point	None
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available
Flammability limit - upper (%)	Not available

Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available
Relative density	Not available.
Solubility(ies)	Complete
Auto-ignition temperature	Not available
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Corrosive to metals.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals.
Incompatible materials	This product may react with reducing agents. Incompatible with bases.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of phosphorus.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Citric Acid (CAS 77-92-9)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	5040 mg/kg
	Rat	3000 mg/kg
Phosphoric acid (CAS 7664-38-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2740 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1530 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.

Serious eye damage/eye irritation	Causes serious eye damage.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.
Further information	Not available.

12. Ecological Information

Ecotoxicity	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.		
	Components	Species	Test Results
	Citric Acid (CAS 77-92-9)		
	<i>Acute</i>		
	Crustacea	EC50 Daphnia magna	120 mg/l, 72 hr
	<i>Aquatic</i>		
	<i>Acute</i>		
	Fish	LC50 Bluegill (<i>Lepomis macrochirus</i>)	1516 mg/l, 96 hr
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	Not available.		
Mobility in soil	Not available.		
Mobility in general	Not available.		
Other adverse effects	Not available.		

13. Disposal Considerations

Disposal instructions	Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid)

Hazard class Limited Quantity - US
Packing group III
Special provisions A7, IB3, N34, T4, TP1
Packaging exceptions 154

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number UN3264
Proper shipping name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)
Hazard class Limited Quantity - Canada
Packing group III
Special provisions 16

IATA/ICAO (Air)

Basic shipping requirements:

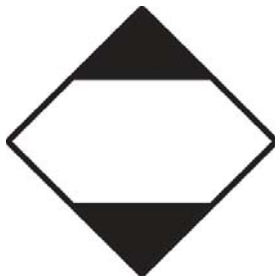
UN number UN3264
Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid)
Hazard class Limited Quantity - IATA
Packing group III

IMDG (Marine Transport)

Basic shipping requirements:

UN number UN3264
Proper shipping name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid)
Hazard class Limited Quantity
Packing group III
EmS F-A, S-B

DOT; IMDG; TDG



IATA



15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphoric acid (CAS 7664-38-2) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No
SARA 311/312 Hazardous chemical No
SARA 313 (TRI reporting)
 Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
 Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
 Not regulated.
Safe Drinking Water Act (SDWA) Not regulated.
Food and Drug Administration (FDA) Not regulated.

US state regulations See below

- US - California Hazardous Substances (Director's): Listed substance**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**
 Not listed.
- US - Illinois Chemical Safety Act: Listed substance**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US - Louisiana Spill Reporting: Listed substance**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US - Minnesota Haz Subs: Listed substance**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US - New Jersey RTK - Substances: Listed substance**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US - New York Release Reporting: Hazardous Substances: Listed substance**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US. Massachusetts RTK - Substance List**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US. Pennsylvania RTK - Hazardous Substances**
 Phosphoric acid (CAS 7664-38-2) Listed.
- US. Rhode Island RTK**
 Phosphoric acid (CAS 7664-38-2) Listed.

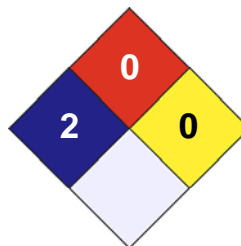
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

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.

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Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Prepared by

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