



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product name** Liquid Ice Machine Cleaner (4207-08, 4834-08, 4207-47, 4834-C7)  
**CAS #** Mixture  
**Product Use** Cleaning scale from ice machines  
**Manufacturer** Nu-Calgon  
2008 Altom Court  
St. Louis, MO 63146 US  
Phone: 314-469-7000 / 800-554-5499  
Emergency Phone: 1-800-424-9300 (CHEMTREC)

## 2. Hazards Identification

**Emergency overview** DANGER  
CAUSES EYE BURNS. CAUSES SKIN BURNS.

**Potential short term health effects**

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

**Eyes** Corrosive. Causes chemical burns. May cause blindness.

**Skin** Corrosive. Causes chemical burns.

**Inhalation** Inhalation of mist may cause respiratory tract irritation, coughing or headache. Very high exposures may cause difficulty breathing, congestion, tightness of chest and haemorrhage.

**Ingestion** Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

**Target organs** Eyes. Respiratory system. Skin.

**Chronic effects** Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

**Signs and symptoms** The product causes burns of eyes, skin and mucous membranes.

**Potential environmental effects** Components of this product have been identified as having potential environmental concerns.

## 3. Composition/Information on Ingredients

Components	CAS #	Percent
Phosphoric acid	7664-38-2	60 - 100

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 20 minutes. Obtain medical attention immediately.

**Skin contact** Immediately flush with cool water for 20 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.

**Inhalation** If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

**Ingestion** 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.

**Notes to physician** Treat patient symptomatically.

**General advice** Wear impervious gloves and chemical splash goggles. Use of an impervious apron is recommended. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

## 5. Fire Fighting Measures

**Flammable properties** Not flammable by WHMIS criteria.

<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of phosphorus. Hydrogen gas.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

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## 6. Accidental Release Measures

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<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Should not be released into the environment. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

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## 7. Handling and Storage

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<b>Handling</b>	<p>Ensure adequate ventilation.</p> <p>Do not get in eyes, on skin or on clothing.</p> <p>Avoid breathing vapours or mists of this product.</p> <p>Use good industrial hygiene practices in handling this material.</p> <p>Keep container tightly closed.</p> <p>Use only with adequate ventilation.</p> <p>Wash thoroughly after handling.</p>
<b>Storage</b>	Store in a tightly closed container in a cool, dry and dark place away from incompatible materials. Keep from freezing. Keep out of the reach of children.

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## 8. Exposure Controls/Personal Protection

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### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

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

<b>Exposure limits</b>	See above
<b>Engineering controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Personal protective equipment</b>	
<b>Eye/Face protection</b>	Wear chemical goggles and face shield.
<b>Hand protection</b>	Impervious gloves. Confirm with reputable supplier first.
<b>Skin and body protection</b>	Use of an impervious apron is recommended. Use of impervious boots is recommended.
<b>Respiratory protection</b>	Avoid breathing mists or vapours. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

**General hygiene considerations**

Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

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**9. Physical and Chemical Properties**

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<b>Appearance</b>	Clear
<b>Colour</b>	Colourless
<b>Form</b>	Liquid
<b>Odour</b>	Odourless
<b>Odour threshold</b>	Not available.
<b>Physical state</b>	Liquid.
<b>pH</b>	< 1 (concentrate)
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	260 °C (500 °F)
<b>Pour point</b>	Not available.
<b>Evaporation rate</b>	Not available
<b>Flash point</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Flammability Limits in Air, Upper, % by Volume</b>	Not available
<b>Flammability Limits in Air, Lower, % by Volume</b>	Not available
<b>Heat of combustion</b>	Not available.
<b>Vapour pressure</b>	0.03 mmHg
<b>Vapour density</b>	Not available
<b>Specific gravity</b>	1.584
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Solubility (Water)</b>	Complete
<b>Relative density</b>	Not available.
<b>Viscosity</b>	Not available.
<b>VOC</b>	0
<b>Percent volatile</b>	Not available

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**10. Stability and Reactivity**

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<b>Reactivity</b>	Reacts vigorously with alkaline material or metals.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Reacts violently with alkaline material. This product may react with reducing agents. Do not mix with other chemicals.
<b>Incompatible materials</b>	Caustics. Oxidizers. Bases. Reducing Agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of phosphorus. Hydrogen gas.

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**11. Toxicological Information**

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**Toxicological data**

<b>Components</b>	<b>Species</b>	<b>Test results</b>
Phosphoric acid (CAS 7664-38-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	2740 mg/kg
<i>Inhalation</i>		
LC50	Not available	

Components	Species	Test results
Oral LD50	Rat	1530 mg/kg
<b>Effects of acute exposure</b>		
Eye contact	Corrosive. Causes chemical burns. May cause blindness.	
Skin contact	Corrosive. Causes chemical burns.	
Inhalation	Inhalation of mist may cause respiratory tract irritation, coughing or headache. Very high exposures may cause difficulty breathing, congestion, tightness of chest and haemorrhage.	
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.	
Sensitisation	Non-hazardous by WHMIS criteria.	
Chronic effects	Non-hazardous by WHMIS criteria.	
Carcinogenicity	Non-hazardous by WHMIS criteria.	
Mutagenicity	Non-hazardous by WHMIS criteria.	
Reproductive effects	Non-hazardous by WHMIS criteria.	
Teratogenicity	Non-hazardous by WHMIS criteria.	
Name of Toxicologically Synergistic Products	Not available.	

## 12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Persistence and degradability	Not available.
Bioaccumulation/accumulation	Not available
Mobility in environmental media	Not available.
Environmental effects	Harmful to aquatic life.
Aquatic toxicity	Not available.
Partition coefficient	Not available.
Chemical fate information	Not available.

## 13. Disposal Considerations

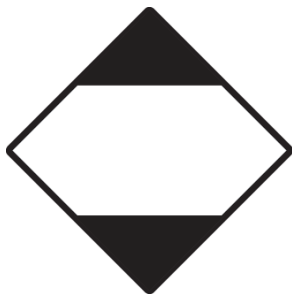
Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

## 14. Transport Information

### Transportation of Dangerous Goods (TDG - Canada)

#### Basic shipping requirements:

UN number	UN1805
Proper shipping name	PHOSPHORIC ACID, LIQUID
Hazard class	Limited Quantity
Packing group	III
Packaging exceptions	<5L - Limited Quantity



**15. Regulatory Information**

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canada WHMIS Ingredient Disclosure: Threshold limits**

Phosphoric acid (CAS 7664-38-2) 1 %

**WHMIS status** Controlled  
**WHMIS Classification** Class E - Corrosive Material

**WHMIS labeling**



**Inventory status**

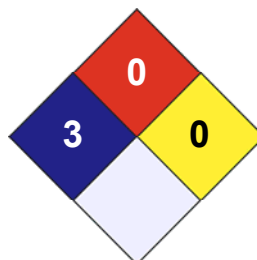
Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. Other Information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

<b>HEALTH</b>	/ 3
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	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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**Other information** For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.