

SAFETY DATA SHEET

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

Revised: 02-10-2014

Replaces: 01-04-2012

1. IDENTIFICATION

Product Name: ICE MACHINE CLEANER M.I.I.
Synonyms: O-99725
CAS Number: MIXTURE
Recommended Use: No data available.
Restrictions on Use: No data available.

Manitowoc Ice
2110 South 26th Street
Manitowoc, WI 54220
(920) 682-0161
www.manitowocice.com

EMERGENCY RESPONSE NUMBER:
CHEMTREC Emergency # (US + Canada):
(800) 424-9300
CHEMTREC Emergency # (INTERNATIONAL):
+01-703-527-3887

2. HAZARD(S) IDENTIFICATION



Signal Word: Danger

GHS Classification: Skin Corrosion/Irritation Category 1A
Serious Eye Damage/Eye Irritation Category 1
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

Hazard Statements: Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary Statements:

Prevention: Do not breathe dust, fume, gas, mist, vapours or spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear gloves, eye and face protection and protective clothing.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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 doctor/physician.
Specific treatment (see First Aid on SDS or on this label).
Wash contaminated clothing before reuse.

Storage: Store in a well-ventilated place. Keep container tightly closed.
Store in a secure manner.

Disposal: Dispose of in accordance with local, regional and international regulations.

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

Hazards Not Otherwise Classified: May react with certain metals to form explosive/flammable hydrogen gas. May react violently with water.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Phosphoric Acid	7664-38-2	< 40 %
Citric Acid	77-92-9	< 10 %

4. FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lens if easy to do.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Do not apply oils or ointments unless ordered by the physician.

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Note to Physicians:

Treatment is symptomatic and supportive.

Most Important Symptoms/Effects:

Eye Contact: CORROSIVE-Causes severe irritation and burns. May cause: permanent eye damage. blindness. redness. pain. swelling. tearing. burns. ulcerations.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Contact may cause: permanent skin damage. Contact may not produce an immediate burning sensation, delaying awareness that contact has occurred. irritation.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: May be corrosive to the respiratory tract. Severe irritation and burns may result. Vapors or mists may irritate: respiratory tract. Serious cases of inhalation may cause: respiratory problems and late pulmonary edema. May cause: coughing. shortness of breath. sore throat. chest discomfort. pain. permanent damage.

Ingestion: CORROSIVE-Causes severe irritation and burns. May irritate or burn: mouth. throat. stomach. May cause: nausea. vomiting. abdominal discomfort. abdominal pain. burning sensation. Severe exposures may cause: shock. circulatory collapse. death.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: For fires in area use appropriate media. For example: Water spray. Dry chemical. Carbon dioxide. Foam.

Fire Fighting Methods: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Product generates heat upon addition of water, with possible spattering. Run-off from fire control may cause pollution.

Fire and Explosion Hazards: Dust generated can be explosive if sufficient quantities are mixed in air. This product may react with certain metals to produce flammable Hydrogen Gas.

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

Hazardous Combustion Products: Phosphorous oxides. Phosphine. Toxic vapors. Carbon dioxide. Carbon monoxide. Dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Spill Clean-Up Procedures: Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Contain spill, place into drums for proper disposal. Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal. Flush remaining area with water and neutralize with Soda Ash, Lime or Limestone and dispose of properly. Adequate ventilation is required if soda ash is used, because of the consequent release of carbon dioxide gas. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Sweep up material into containers and dispose of properly. Vacuuming or wet sweeping may be used to avoid dust dispersal. Neutralize remaining residue with weak alkaline solution and dispose of properly. Flush remaining area with water to remove trace residue and dispose of properly.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. CORROSIVE MATERIAL.

Storage: CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Do not freeze. May react with certain metals to produce flammable hydrogen gas. See Section 10 for incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Phosphoric Acid	1 mg/m ³ TWA

ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Phosphoric Acid	3 mg/m ³ STEL; 1 mg/m ³ TWA

Engineering Controls: General room ventilation and local exhaust are required. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Eye/Face Protection: Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Acid-proof. Gauntlet-type. Rubber. Neoprene. Nitrile.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved respirator. Acid gas cartridge. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.
Color: Clear. Green.
Odor: No odor.
Odor Threshold: N.D.
pH: < 2.00 (as is)
Freezing Point (deg. F): N.D.
Melting Point (deg. F): N.D.
Initial Boiling Point or Boiling Range: N.D.
Flash Point: N.A.
Flash Point Method: N.A.
Evaporation Rate (nBuAc = 1): N.D.
Flammability (solid, gas): N.D.
Lower Explosion Limit: N.A.
Upper Explosion Limit: N.A.
Vapor Pressure (mm Hg): N.D.
Vapor Density (air=1): N.D.
Specific Gravity or Relative Density: 1.22-1.24 @ 25 Deg. C
Solubility in Water: Complete
Partition Coefficient (n-octanol/water): N.D.
Autoignition Temperature: No Data
Decomposition Temperature: N.D.
Viscosity: N.D.
% Volatile (wt%): N.D.
VOC (wt%): N.D.
VOC (lbs/gal): N.D.
Fire Point: N.D.

10. STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions. May react with certain metals to produce flammable hydrogen gas. Mixing with strong bases can cause high heat of reaction and generate steam. Phosphoric acid forms flammable gases with sulfides, mercaptans, cyanides and aldehydes. Phosphoric acid forms toxic fumes with cyanides, sulfides, fluorides, organic peroxides, and halogenated organics. Phosphoric acid mixtures with nitromethane are explosive.

Conditions to Avoid: Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Avoid high temperatures.

Incompatible Materials: Metals. Strong oxidizing agents. Strong reducing agents. Sulfides. Sulfites. Bases. Fluorine. Sulfur trioxide. Phosphorous pentoxide. Sodium tetrahydroborate. Aldehydes. Amines. Amides. Alcohols. Azo-compounds. Carbamates. Esters. Caustics. Phenols. Cresols. Ketones. Organophosphates. Epoxides. Explosives. Combustible materials. Unsaturated halides. Organic peroxides. Mercaptans. Cyanides. Nitromethane. Glycols. Fluorides. Halogenated organics. Carbonates. Acetates. Potassium Tartrate. Metal Nitrates. Bicarbonates. Aluminum. Magnesium. Corrosive effect on: Copper, aluminum, zinc and their alloys.

Hazardous Decomposition Products: Phosphorous oxides. Phosphine. Reactions with other materials may liberate toxic and/or explosive gases. Carbon dioxide. Carbon monoxide. Smoke.

11. TOXICOLOGICAL INFORMATION

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Phosphoric Acid	Rat: 1530 mg/kg	Rabbit: 2730 mg/kg	1H Rat: > 850.0

Acute Toxicity Estimate (ATE):

Oral: 4,744 mg/kg
Inhalation Vapor: 21.3333 mg/L
Inhalation Dust/Mist: 21.3333 mg/L

Routes of Exposure: Eyes. Skin. Inhalation. Ingestion.

Eye Contact: CORROSIVE-Causes severe irritation and burns. May cause: permanent eye damage. blindness. redness. pain. swelling. tearing. burns. ulcerations.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Contact may cause: permanent skin damage. Contact may not produce an immediate burning sensation, delaying awareness that contact has occurred. irritation.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: May be corrosive to the respiratory tract. Severe irritation and burns may result. Vapors or mists may irritate: respiratory tract. Serious cases of inhalation may cause: respiratory problems and late pulmonary edema. May cause: coughing. shortness of breath. sore throat. chest discomfort. pain. permanent damage.

Ingestion: CORROSIVE-Causes severe irritation and burns. May irritate or burn: mouth. throat. stomach. May cause: nausea. vomiting. abdominal discomfort. abdominal pain. burning sensation. Severe exposures may cause: shock. circulatory collapse. death.

Medical Conditions Aggravated by Exposure to Product: Eye disorders. Skin disorders. Impaired respiratory function. Respiratory system disorders.

Other: None known.

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D002

Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

14. TRANSPORT INFORMATION

DOT (Department of Transportation):

Identification Number: UN1760
Proper Shipping Name: Corrosive Liquid, N.O.S. (Contains Phosphoric Acid, Citric Acid)
Hazard Class: 8
Packing Group: III
Label Required: CORROSIVE
Reportable Quantity (RQ): 5000# (Phosphoric Acid)

Note: The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. In the United States, it may be possible to reclassify this material as a Consumer Commodity ORM-D based on 49 CFR 173.154 (b)(c).

15. REGULATORY INFORMATION

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category Hazards:

<u>Immediate (Acute)</u> Yes	<u>Delayed (Chronic)</u> No	<u>Fire Hazard</u> No	<u>Pressure Release</u> No			<u>Reactive</u> No	
Regulated Components:	CAS	CERCLA	SARA	SARA	U.S.	WI	Prop
Component	Number	RQ	EHS	313	HAP	HAP	65
Phosphoric Acid	7664-38-2	Yes	No	No	No	Yes	No

***Prop 65 - May Contain the Following Trace Components:**

- Arsenic
- Lead
- Cadmium
- 1,4-Dioxane
- Propylene Oxide
- Ethylene Oxide

16. OTHER INFORMATION

Hazard Rating System

Health: 3
Flammability: 0
Reactivity: 0

* = Chronic Health Hazard

NFPA Rating System

Health: 3
Flammability: 0
Reactivity: 0
Special Hazard: None

MSDS Abbreviations

N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
C = Ceiling Limit
N.E./Not Estab. = Not Established

MSDS Prepared by: CSH

Reason for Revision: Changes made throughout the MSDS. New format.

Revised: 02-10-2014
Replaces: 01-04-2012

The data in this Material Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which MANITOWOC ICE assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.