

SAFETY DATA SHEET

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

Revised: 05-04-2015

Replaces: 02-10-2014

1. IDENTIFICATION

Product Identifier: ICE MACHINE CLEANER M.I.I.
Other Identifiers: 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

GHS Classification(s): Skin Corrosion/Irritation Category 1C
Serious Eye Damage/Eye Irritation Category 1

GHS Label Elements:

GHS Hazard Symbols:



Signal Word: Danger

Hazard Statements: Causes severe skin burns and eye damage.

Precautionary Statements:

Prevention: Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

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 secure manner.

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

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

ICE MACHINE CLEANER M.I.I.
Product ID: MI089500

Substances/Mixtures:

Chemical or Common Name/Synonyms	CAS Number	% by Wt.
Phosphoric Acid	7664-38-2	< 40 %
Citric Acid	77-92-9	< 10 %

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

4. FIRST-AID MEASURES

Description of Necessary Measures:

Eye Contact: If in eyes: 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: If on skin: 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: If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. DO NOT use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Ingestion: If swallowed: 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.

Most Important Symptoms/Effects, Acute and Delayed:

Eye Contact: CORROSIVE-Causes severe irritation and burns. May cause: ulcerations. conjunctivitis. permanent eye damage. blindness. redness. burning sensation.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Contact may cause: dermatitis (inflammation of the skin). ulceration. permanent skin damage. drying. cracking. itching. redness. burning sensation.

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 or burn: respiratory tract. nose. mouth. throat. May cause: persistent coughing. pulmonary edema. chemical pneumonitis. permanent damage.

Ingestion: CORROSIVE-Causes severe irritation and burns. May irritate or burn: mouth. throat. stomach. esophagus. May cause: abdominal pain. chest pain. nausea. vomiting. diarrhea. seizures. hemorrhaging. permanent damage. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury. May be fatal if swallowed.

Indication of Immediate Medical Attention and Special Treatment Needed: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Not flammable or combustible. For fires in area use appropriate media. For example: Water spray. Dry chemical. Carbon dioxide. Foam.

Specific Hazards Arising from the Chemical:

Fire and Explosion Hazards: None known. May react with certain metals to form explosive/flammable hydrogen gas.

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

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

Special Protective Equipment and Precautions for Fire-Fighters: 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, Emergency Procedures: CORROSIVE MATERIAL. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

Methods and Materials for Containment and Clean Up: 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.

7. HANDLING AND STORAGE

Precautions for Safe 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. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Mixing with strong bases can cause high heat of reaction and generate steam.

Conditions for Safe Storage, Including any Incompatibilities: 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 form explosive/flammable hydrogen gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

Component	Limits
Phosphoric Acid	1 mg/m ³ TWA

ACGIH Exposure Guidelines:

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

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.

Individual Protection Measures:

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: Impervious. Chemical-resistant. Acid-proof.

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. 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 (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 form explosive/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. Sulfur. Aluminum. Copper. Mild steel. Brass. Bronze. Steel. Alkalies. Carbonates. Acetates. Potassium Tartrate. Metal Nitrates. Reducing agents. Bicarbonates. Alkali

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

metals. Copper, aluminum, zinc and their alloys. Lead. Oxides of sulfur. Fiber-reinforced Polyester. Cast Iron. Reactive Metals.

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

11. TOXICOLOGICAL INFORMATION

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

Symptoms/Effects: Acute, Delayed and Chronic:

Eye Contact: CORROSIVE-Causes severe irritation and burns. May cause: ulcerations. conjunctivitis. permanent eye damage. blindness. redness. burning sensation.

Skin Contact: CORROSIVE-Causes severe irritation and burns. Contact may cause: dermatitis (inflammation of the skin). ulceration. permanent skin damage. drying. cracking. itching. redness. burning sensation.

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 or burn: respiratory tract. nose. mouth. throat. May cause: persistent coughing. pulmonary edema. chemical pneumonitis. permanent damage.

Ingestion: CORROSIVE-Causes severe irritation and burns. May irritate or burn: mouth. throat. stomach. esophagus. May cause: abdominal pain. chest pain. nausea. vomiting. diarrhea. seizures. hemorrhaging. permanent damage. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury. May be fatal if swallowed.

Numerical Measures of Toxicity:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric Acid	Rat: 1530 mg/kg	Rabbit: 2730 mg/kg	1H Rat: > 850 mg/m3
Citric Acid	Rat: 3000 mg/kg	Rat: > 2000 mg/kg	No Data
Oxirane, Methyl-, Polymer with Oxirane	No Data	No Data	4H Rat: 320 mg/m3

Acute Toxicity Estimate

(ATE):

Inhalation Vapor: 21.3333 mg/L

Inhalation 21.3333 mg/L

Dust/Mist:

Cancer Information:

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

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

Other: None known.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D002

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

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. Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.

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>	<u>Delayed (Chronic)</u>	<u>Fire Hazard</u>	<u>Pressure Release</u>	<u>Reactive</u>
Yes	No	No	No	No

Regulated Components:

<u>Component</u>	<u>CAS Number</u>	<u>CERCLA RQ</u>	<u>SARA EHS</u>	<u>SARA 313</u>	<u>U.S. HAP</u>	<u>WI HAP</u>	<u>Prop 65</u>
Phosphoric Acid	7664-38-2	Yes	No	No	No	Yes	No

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

This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

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

SDS Abbreviations

N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

ICE MACHINE CLEANER M.I.I.

Product ID: MI089500

C = Ceiling Limit

N.E./Not Estab. = Not Established

SDS Prepared by: JAK

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

Revised: 05-04-2015

Replaces: 02-10-2014

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.