



SAFETY DATA SHEET

Issue Date 06-Apr-2023 Revision Date 06-Apr-2023 Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name Manitowoc Ice Machine Descaler

Other means of identification

Product Code N041-13296

Synonyms None

Details of the supplier of the safety data sheet

Company Name Magnus
16005 Gateway Drive
Ste 300
Frisco, TX 75006
(855)962-4687
www.magnuschemicals.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

May be harmful if swallowed

Causes severe skin burns and eye damage



Appearance Clear Blue Green

Physical state Liquid

Odor Acidic

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS)

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

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Drink plenty of water

Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations

Hazards not otherwise classified (HNOC)**Other Information**

- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Phosphoric Acid	7664-38-2	10-30	*
Citric Acid	77-92-9	3-7	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures**General advice**

Immediate medical attention is required.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. For minor skin contact, avoid spreading material on unaffected skin. For severe burns, immediate medical attention is required.

Eye contact

Do not rub affected area. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.

Ingestion

Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed**Symptoms**

Any additional important symptoms and effects are described in Section 11: Toxicology

Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Environmental precautions

Environmental precautions

Do not allow into any storm sewer drains, lakes, streams, ponds, estuaries, oceans or other surface water bodies. Should not be released into the environment. Dispose of according to all local city, state and federal rules and regulations.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. Take up mechanically, placing in appropriate containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible materials Incompatible with strong acids and bases. Incompatible with oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric Acid 7664-38-2	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Tight sealing safety goggles. Wear a face shield if splashing hazard exists.
- Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear Blue Green
Color Blue Green
Odor Acidic
Odor threshold No Information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	<1	
Specific Gravity	1.164	
Viscosity	Water Thin	
Melting point/freezing point	No Information available	
Flash point	None	
Boiling point / boiling range		
Evaporation rate	No Information available	
Flammability (solid, gas)	No data available	
Flammability Limits in Air		
Upper flammability limit:	No Information available	
Lower flammability limit:	No Information available	
Vapor pressure	No Information available	
Vapor density	No Information available	
Water solubility	Complete	

Partition coefficient	No Information available
Autoignition temperature	No Information available
Decomposition temperature	No Information available

Other Information

Density Lbs/Gal	9.6950
VOC Content (%)	Not Applicable

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

The primary effects and toxicity of this material are due to its corrosive nature.

Inhalation

Avoid breathing vapors or mists. Breathing of vapor can cause respiratory irritation and inflammation. Breathing of mist or liquid can cause burns to the respiratory tract.

Eye contact

Avoid contact with eyes. Corrosive. Causes severe eye damage.

Skin Contact

Avoid contact with skin. Corrosive. Contact with skin may cause severe irritation and burns.

Ingestion

May be harmful if swallowed. Ingestion causes acute irritation and burns to the mucous membranes of the mouth, trachea, esophagus and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric Acid 7664-38-2	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	> 850 mg/m ³ (Rat) 1 h
Citric Acid 77-92-9	= 3 g/kg (Rat)	> 2000 mg/kg (Rat)	-

Information on toxicological effects**Symptoms**

No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

No Information available.

Germ cell mutagenicity

No Information available.

Carcinogenicity

No Information available.

Reproductive toxicity

No Information available.

STOT - single exposure

No Information available.

STOT - repeated exposure

No Information available.

Chronic toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.

Target organ effects

EYES, Respiratory system, Skin.

Aspiration hazard

No Information available.

Numerical measures of toxicity - Product Information**Unknown Acute Toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 4,927.50

ATEmix (dermal) 7,752.60

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Citric Acid 77-92-9	-	1516: 96 h Lepomis macrochirus mg/L LC50	-

Persistence and degradability

No Information available.

Bioaccumulation

Bioaccumulative potential.

Chemical Name	Partition coefficient
Phosphoric Acid 7664-38-2	-0.9
Citric Acid 77-92-9	-1.72

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Phosphoric Acid 7664-38-2	Corrosive

14. TRANSPORT INFORMATION

Per CFR 173.154 (b)(1), for corrosive materials in Packaging Group II, this product can ship as Limited Quantity if packaged not over 1.0 L (0.3 gallon) net capacity each for liquids or not over 1.0 kg (2.2 lbs) net capacity each for solids, packed in a strong outer packaging. Must not exceed 30 kg (66 pounds) gross weight.

DOT

UN/ID No.

UN3264

Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s.
Hazard Class 8
Packing Group II
Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (contains Phosphoric Acid), 8, II
Emergency Response Guide Number 154

UN/ID No. UN3264
Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s.
Hazard Class 8
Packing Group II
Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (contains Phosphoric Acid), 8, II

15. REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phosphoric Acid 7664-38-2	5000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Phosphoric Acid 7664-38-2	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product has been evaluated and does not require warning labeling under California Proposition 65.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Phosphoric Acid 7664-38-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection C

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Revision Note

No Information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet