MATERIAL SAFETY DATA SHEET

Todact Number (s). H-301, H-305, H-305, H-355	Other Limits (STEL) 3 mg/m ³ none listed	< 8
roduct Use: Ice machine cleaner Re ompany Name: North American Research Corporation P.O. Box 1318 Lewisville, TX 75067 elephone Numbers: (972) 492-1800, (800) 527-7520, Fax (972) 394-6755 ransportation Emergencies: Infotrac (800) 535-5053 (24 hours, everyday) ECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS SHA Hazardous Components (29 CFR 1910.1200): CAS Registry No. OSHA PEL ACGIH TLV Phosphoric Acid 7664-38-2 1 mg/m ³ 1 mg/m ³ Citric Acid 77-92-9 none listed none listed ECTION 3 HAZARDS IDENTIFICATION MERGENCY OVERVIEW DANGER! CORROSIVE. CAUSES SEVERE BURNS TO SKIN, EYES, AND OTHER BODY T IF SWALLOWED. DTENTIAL HEALTH EFFECTS EYE CONTACT: Corrosive. May cause permanent damage including blindness. SKIN CONTACT: Corrosive. May cause permanent damage. INHALATION: Not an expected hazard unless misted. May cause irritation and corrosive effect respiratory tract.	Other Limits (STEL) 3 mg/m ³ none listed	(<u>Optional</u>) < 40 < 8
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respiratory tract.		
INGESTION: Corrosive, May cause burns to mouth throat, and stomach	cts to the nose, thr	oat, and
and stories individuos burns to mouth, throat, and stornach		
HRONIC EXPOSURE: No known chronic effects.		
EDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known other than existing skin disord	ers	
ARCINOGENICITY: NTP? No IARC Monographs? No OSHA Regulated? No		
ECTION 4 FIRST-AID MEASURES		
EYE CONTACT: Immediately flush eyes with running water for at least 15 minutes, keeping eyeli immediately.	ids open. Get med	dical attention
SKIN CONTACT: Flush immediately with plenty of water for at least 15 minutes. Get medical atter	ntion immediately	
INHALATION: If breathing is difficult: Remove to fresh air. Get medical attention immediately.		
INGESTION: Do not induce vomiting! Immediately drink large quantities of water. Never give unconscious person. Get medical attention immediately.	anything by mout	h to an
CTION 5 FIRE-FIGHTING MEASURES		
ASHPOINT: Not flammable METHOD: Not applicable		
AMMABLE LIMITS: LEL: Not applicable UEL: Not applicable AUTOIGNITION TEMP:	Not applicable	
ENERAL HAZARD: Not considered to be a fire hazard. Will react with some metals, eg. Aluminum, tir hydrogen gas.	n, zinc to form flan	nmable
RE EXTINGUISHING MEDIA: Use means suitable for extinguishing surrounding fire. Water spray ma containers cool.	ay be used to keep	p fire-exposed
ECIAL INFORMATION: Corrosive material. See sections 8 and 10.		
CTION 6 ACCIDENTAL RELEASE MEASURES		
RSONAL PRECAUTIONS: Put on appropriate personal protective equipment.		
IVIRONMENTAL PRECAUTIONS AND CLEAN-UP:		
Small spills: Mop up or soak up with rags and flush with water.		
In the event of major spillage: Use appropriate containment consistent with good industrial or environmuch as possible. Pump, sweep or scrape up the remaining material and place in suitable clear proper methods. Use a water rinse for final clean-up.	onmental practice an containers for	Recover as

SECTION 7 STORAGE AND HANDLING

HANDLING: Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid breathing vapors or spray mists. Wash thoroughly after handling. Remove and wash contaminated clothing and footwear before reuse. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. FOR INDUSTRIAL USE ONLY.

STORAGE: Keep tightly closed in original container. Store in a cool, dry, ventilated area. Protect against physical damage. Tip: For transport on service truck, place container inside of plastic pail and immobilize pail.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS: Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.

PERSONAL PROTECTION:

EYES: Chemical splash goggles.

- HANDS: Chemical resistant gloves; rubber, neoprene, or other impervious material.
- RESPIRATORY: If mists/vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over exposure. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
 - FEET: Chemical resistant boots; rubber, neoprene, or other impervious material.
 - BODY: If major exposure is possible, wear suitable, impervious protective clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Light green liquid. Odorless.

VAPOR PRESSURE: Less than 0.1 @ 68°F

SOLUBILITY IN WATER: Complete

BOILING POINT: 260°F

EVAPORATION RATE (Butyl Acetate = 1): No information available.

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable under ordinary conditions of use and storage.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (Materials to Avoid): Contact with strong caustics can cause liberation of much heat and violent spattering. Contact with most metals causes formation of flammable and explosive hydrogen gas. Avoid contact with materials such as sulfides and sulfites which could release toxic gases.

HAZARDOUS DECOMPOSITION PRODUCTS: Phosphorus oxides may form when heated to decomposition.

SECTION 11 TOXICOLOGICAL INFORMATION

Phosphoric Acid (7664-38-2): LD50 - lethal dose 50% of test species, 1530 mg/kg, rat.

SECTION 12 ECOLOGICAL INFORMATION

No specific information available.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal of unused product is regulated under environmental and transportation laws as a corrosive waste. Dispose of container and unused contents in accordance with federal, state, and local requirements.

SECTION 14 TRANSPORT INFORMATION

U.S. Department of Transportation:

Consumer Commodity ORM-D: Only for U.S. domestic, ground shipments of packages no more than 66 lbs., gross weight, and inner packages no more than 1 gallon.

Phosphoric Acid Solution, 8, UN1805, PGIII: For all other shipments.

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.

CERCLA: Phosphoric Acid (7664-38-2); RQ 5000 lbs.

SARA TITLE III: Section 311/312 Hazard Category: Acute: Yes Chronic: No Fire: No Pressure: No Reactive Hazard: No Section 313 Reportable Ingredients: None

SECTION 16 OTHER INFORMATION

NFPA RATING: Health - 2, Flammability - 0, Reactivity - 0

HMIS® RATING: Health - 3, Flammability - 0, Reactivity - 0

HMIS[®] ratings are to be used with a fully implemented HMIS[®] program. HMIS[®] is a registered mark of the National Paint and Coatings Association (NPCA).

NOTICE: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all federal, state, provincial, and local laws and regulations.

SPECIFIC GRAVITY: 1.11 VAPOR DENSITY: 3.4 pH: 1 FREEZING / MELTING POINT: Not applicable