

MATERIAL SAFETY DATA SHEET



Phosphoric Acid 10% v/v (1+9)

SECTION 1 . Product and Company Identification

Product Name and Synonym: Phosphoric Acid 10% v/v (1+9)
Product Code: BDH3346
Material Uses:
Manufacturer: Aqua Solutions, Inc
6913 Hwy 225
Deer Park, TX 77536
(281) 479-2569
Entry Date : 4/5/2010
Print Date: 7/21/2010
24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	2			
Flammability:	0			
Reactivity:	0			
Hazard Rating:				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
NA = Not Applicable		NE = Not Established		

SECTION 2 HAZARD IDENTIFICATION

CAUSES EYE AND SKIN BURNS. HARMFUL IF INHALED OR SWALLOWED.
CAUSES RESPIRATORY TRACT IRRITATION. Avoid breathing vapor or mist.
Use only with adequate ventilation. Wash thoroughly after handling.

Physical state: Liquid
Odor: Odorless.
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview:
DANGER!
CAUSES EYE AND SKIN BURNS.
HARMFUL IF INHALED OR SWALLOWED.
CAUSES RESPIRATORY TRACT IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
Do not ingest. Do not get in eyes or on skin or clothing
Avoid breathing vapor or mist.
Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Routes of entry:
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Eyes: Corrosive to eyes.
Skin: Corrosive to the skin.
Inhalation: Toxic by inhalation. Irritating to the respiratory system.
Ingestion: Toxic if swallowed. May cause burns to mouth, throat and stomach,
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.
Medical conditions aggravated by over-exposure:
Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged exposure to contact with spray or mist may chronic eye irritation and severe skin irritation.
Repeated or prolonged exposure to the substance can produce target organs damage.

SECTION 3 MIXTURE COMPONENTS

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SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input checked="" type="checkbox"/>	Phosphoric Acid 85% w/w	CAS# 7664-38-2	10%	W/W	TWA 1 mg/m ³ STEL 3mg/m ³
<input type="checkbox"/>	Water, Deionized ASTM Type II	CAS# 7732-18-5	90%	W/W	None Established

SECTION 4 FIRST AID MEASURES

CAUSES EYE AND SKIN BURNS. HARMFUL IF INHALED OR SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. Avoid breathing vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling.

FIRST AID: SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. CALL A PHYSICIAN. Thoroughly clean clothing and shoes before reuse.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. If exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire

Fire / Explosion Hazards: May emit toxic fumes in a fire, contact with metals may form flammable gas.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

Personal precautions: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up: If emergency personal are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

SECTION 7 HANDLING AND STORAGE

Store in a cool dry place. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: NIOSH/MSHA-approved respirator.

Ventilation

Local Exhaust

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Mechanical

Protective Gloves: Gloves to prevent skin exposure as rubber or vinyl

Eye Protection: Splash Goggles,
face shield

Other Protective Equipment: Wear appropriate clothing to prevent
skin exposure

Product name - United States –

Phosphoric Acid

ACGIH TLV (United States, 1/2006).

STEL: 3 mg/m³ 15 minute(s). Form: All forms

TWA: 1 mg/m³ 8 hour(s) Form: All forms

NIOSH REL (United States, 12/2001).

STEL: 3 mg/m³ 15 minute(s). Form: All forms

TWA: 1 mg/m³ 10 hour(s) Form: All forms

OSHA PEL (United States, 8/1997).

TWA: 1 mg/m³ 8 hour(s) Form: All forms

OSHA PEL 1989 (United States, 3/1989).

STEL: 3 mg/m³ 15 minute(s). Form: All forms

TWA: 1 mg/m³ 8 hour(s) Form: All forms

Consult local authorities for acceptable exposure limits.

Engineering measurers: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended:

face shield

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended:

gloves safety apron

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Recommended: Vapor respirator. Be sure to use an approved/ certified respirator or equivalent. Vapor respirator or self- contained breathing apparatus (SCBA)

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be

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used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	~ 0°C	Percent Volatile by Volume:	~ 90%
Boiling Point:	~ 100°C	Evaporation Rate	Information not available
Vapor Pressure:	Information not available	Evaporation Standard	
Vapor Density:	Information not available	Auto Ignition Temp	Not applicable
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	Not applicable
Appearance /Odors:	Colorless, odorless liquid	Upper Flamm. Limit in Air	Not applicable
Flash Point:	Not flammable		
Specific Gravity:	~ 1.1		

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability:	Stable
Conditions to Avoid:	Excessive heat
Materials to Avoid:	Metals, acids.
Hazardous Decomposition Products:	Phosphorus Oxides
Hazardous polymerization:	Not expected to occur
Conditions to Avoid:	None known

SECTION 11 Toxicological Information

Toxicity data- United States- Product/ ingredient name:

Phosphoric Acid			
LD50	1530 mg/kg	Oral	Rat
LD50	1530 mg/kg	Oral	Rat
LD50	2740 mg/kg	Dermal	Rabbit
LD50	2740 mg/kg	Dermal	Rabbit
LD50	850 mg/kg	Inhalation	Rat
	(1 hour/hours)		

Contains material which causes damage to the following organs:
upper respiratory tract, skin,
eye, lens or cornea

Other toxic effects on humans:
Very hazardous in case of skin contact (irritant, corrosive), of eye contact (corrosive), of ingestion (lung irritant). Slightly hazardous in case of inhalation (lung corrosive).

Specific effects
Carcinogenic effects: No known significant effects or critical hazards
Mutagenic effects: No known significant effects or critical hazards
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

Sensitization
Ingestion: May cause burns to mouth, throat and stomach
Inhalation: Irritating to respiratory system.

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Eyes: Corrosive to eyes.
Skin: Corrosive to the skin

SECTION 12 Ecological Information

Environmental precautions: No known significant effects or critical hazards.
Products of degradation:
These products are phosphates.
Toxicity of the products of biodegradation: The products of degradation are less toxic than the product itself.

SECTION 13 Disposal Considerations

Waste disposal: the generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

RCRA classification: Code: (C)

SECTION 14 Transport Information

DOT Classification: Phosphoric acid solution, 8, UN1805, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States

HCS Classification:
Toxic material
Target organ effects
Corrosive material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notifications: No products were found.
SARA 302/304/311/312 hazardous chemicals: Phosphoric Acid
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Phosphoric Acid
Immediate (acute) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Phosphoric Acid
Clean Air Act (CAA) 112 accidental release prevention: No products were found
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.
Clean Air Act (CAA) 112 regulated toxic substance: No products were found

State regulations:

Pennsylvania RTK: Phosphoric Acid
(environmental hazard, generic environmental hazard)
Massachusetts RTK: Phosphoric Acid
New Jersey: Phosphoric Acid 10% (1+9)

Canada

WHMIS (Canada) :

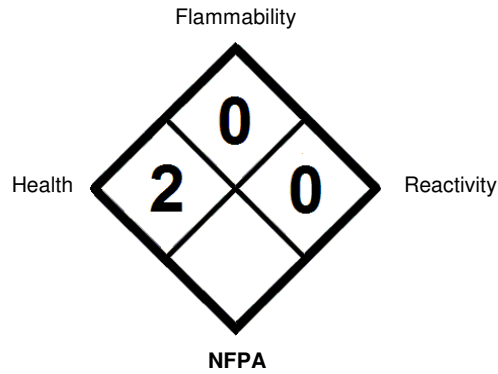
Class E: Corrosive material

CEPA DSL/ CEPA NDSL : CEPA DSL: Phosphoric Acid
, Water

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

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Revisions

7/20/2010

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Review date for MSDS. STN

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.