

# MATERIAL SAFETY DATA SHEET



Potassium Hydroxide 50% w/v

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Potassium Hydroxide 50% w/v  
Product Code: 7284  
Material Uses:  
Manufacturer: Aqua Solutions, Inc  
6913 Hwy 225  
Deer Park, TX 77536  
(281) 479-2569  
Entry Date : 12/1/2014  
Print Date: 12/1/2014  
24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

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

## SECTION 2 HAZARD IDENTIFICATION

**DANGER! POISON! MAY BE FATAL IF SWALLOWED! CORROSIVE! CAUSES SEVERE RESPIRATORY TRACT, EYE AND SKIN BURNS, HARMFUL IF INHALED OR ABSORBED THROUGH THE SKIN.**

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!  
POISON!  
MAY BE FATAL IF SWALLOWED.  
CAUSES SEVERE EYE AND SKIN BURNS.  
HARMFUL IF INHALED  
CAUSES SEVERE RESPIRATORY TRACT IRRITATION.  
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:  
LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.  
CORROISIVE

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: Severely corrosive to the eyes.  
Skin: Corrosive to the skin.  
Inhalation: Toxic by inhalation. Irritating to respiratory system.  
Ingestion: Very 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

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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**

| SARA 313                 | Component                     | CAS Number     | Percent Comp. | Dimension | Exposure Limits  |
|--------------------------|-------------------------------|----------------|---------------|-----------|------------------|
| <input type="checkbox"/> | Potassium Hydroxide           | CAS# 1310-58-3 | 50%           | W/V       | OSHA PEL 2 mg/mf |
| <input type="checkbox"/> | Water, Deionized ASTM Type II | CAS# 7732-18-5 | Balance       | V/V       | None Established |

**SECTION 4 FIRST AID MEASURES**

DANGER! POISON! MAY BE FATAL IF SWALLOWED! CORROSIVE! CAUSES SEVERE RESPIRATORY TRACT, EYE AND SKIN BURNS, HARMFUL IF INHALED OR ABSORBED THROUGH THE SKIN.

FIRST AID: SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. If symptoms persist, seek medical attention.

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: Negligible fire hazard when exposed to heat or flame.

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. Keep containers tightly closed.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

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Respiratory Protection: NIOSH/MSHA-approved respirator.

Ventilation

Local Exhaust

Mechanical

Protective Gloves: Wear appropriate gloves to prevent skin exposure.

Eye Protection: Face Shield

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

Product name - United States – Potassium Hydroxide

Exposure limits

ACGIH TLV (United States, 2002).

CEIL: 2 mg/m<sup>3</sup>

NIOSH REL (United States, 2001).

TWA: 2 mg/m<sup>3</sup> 10 hour(s)

OSHA Final Rule (United States, 1989).

CEIL: 2 mg/m<sup>3</sup>

OSHA PEL 1989 (United States, 1989).

CEIL: 2 mg/m<sup>3</sup>

ACGIH TLV (United States, 1/2005).

C: 2 mg/m<sup>3</sup> Form: All forms

NIOSH REL (United States, 12/2001).

TWA: 2 mg/m<sup>3</sup> 10 hour(s) Form: All forms

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

CEIL: 2 mg/m<sup>3</sup> Form: All forms

Consult local authorities for acceptable exposure limits.

Engineering measures: 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.

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: full suit and gloves

Feet: Recommended: boots.

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).

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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 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:       | Information not available  | Percent Volatile by Volume: | Information not available |
| Boiling Point:       | Information not available  | 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:    | Information not available  |                             |                           |

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

|                                   |  |
|-----------------------------------|--|
| Stability:                        | Stable   |
| Conditions to Avoid:              | Moisture, may ignite combustibles.                         |
| Materials to Avoid:               | Acids, Acrolein, alcohols, aluminum, Chlorine, Halogenates |
| Hazardous Decomposition Products: | Not known to occur   |
| Hazardous polymerization:         | Not reported to occur under normal conditions              |
| Conditions to Avoid:              | None known   |

**SECTION 11 Toxicological Information**

Toxicity data- United States- Product/ ingredient name: Potassium Hydroxide

| TEST | RESULT    | ROUTE | SPECIES |
|------|-----------|-------|---------|
| LD50 | 273 mg/kg | Oral  | Rat     |

Chronic effects on humans: CARCINOGENIC EFFECTS Classified None. By NIOSH [Potassium Hydroxide]. Contains material which causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea

Other toxic effects on humans: Extremely hazardous in case of skin contact (corrosive), of eye contact (corrosive), of ingestion, 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.

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## Sensitization

Ingestion: : May cause burns to mouth, throat and stomach

Inhalation: : Irritating to respiratory system

Eyes: Severely corrosive to the eyes.

Skin: Corrosive to the skin.

## SECTION 12 Ecological Information

Environmental precautions: No known significant effects or critical hazards.

Products of degradation:

some metallic oxides

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.

RCRA classification: Code: (C) (T)

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.

## SECTION 14 Transport Information

DOT Classification: UN1814, Potassium Hydroxide Solution, 8,  
PG II

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:

Highly toxic material

Corrosive material

Target organ effects

U.S. Federal regulations:

United States inventory (TSCA 8b): listed

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: Potassium Hydroxide.

SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Potassium Hydroxide: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Potassium Hydroxide.

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: Potassium Hydroxide: generic environmental hazard

Massachusetts RTK: Potassium Hydroxide

New Jersey: Potassium Hydroxide 50%

Canada

WHMIS (Canada)

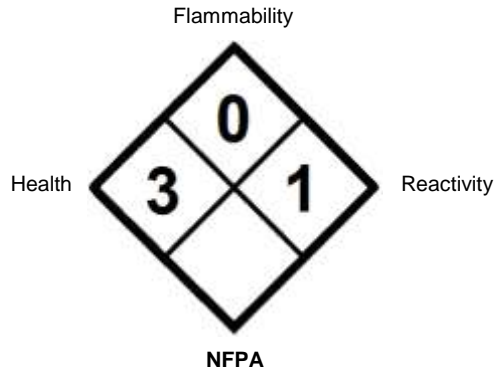
Class D-1B: Material causing immediate and serious toxic effects (Toxic)

Class E: Corrosive material

CEPA DSL/ CEPA NDSL : CEPA DSL: Potassium Hydroxide; 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



Revisions

0.1

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.