Diversatek Healthcare

SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **Buffer Solution pH 1.00 Clear**

Product Code(s): D82-3103

Synonyms: Mixture.

Recommended Use: For manufacturing, industrial, and laboratory use only. Use as a laboratory reagent.

Uses Advised Against: Not for food, drug, or household use.

Manufacturer: Diversatek Healthcare
9150 Commerce Center Circle, Suite 500 Highlands Ranch, CO 80129 USA
Phone: (414) 265-7620 Fax: (414) 265-7628

Emergency Phone Number: For health emergency call poison control: (800) 222-1222.

2. HAZARDS IDENTIFICATION

Hazard Classifications: This product is classified as not hazardous under OSHA's Hazard Communication Standard, 29 CFR 1910.1200 (HCS) and the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). However, all chemicals handled and used in the workplace should be treated with caution.

Signal Word: Not applicable.

Hazard Statements: Not applicable.

Pictograms: Not applicable.

Precautionary Statements:

Prevention: Not applicable.

Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	99.1
Potassium Chloride	Chloride, Potassium Salt	7447-40-7	KCl	0.371
Formaldehyde	Formalin	50-00-0	HCHO	0.0216
Methanol	Methyl Alcohol	67-56-1	CH_3OH	0.00731
Hydrochloric Acid	Muriatic Acid	7647-01-0	HCl	0.487

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-tomouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation 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. Call a physician if symptoms occur.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a physician or poison control center if symptoms occur.

Skin Contact: Wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if symptoms occur.

Eye Contact: Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician if symptoms occur.

General Advice: Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that those providing first aid and medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Symptoms and Effects: Inhalation may cause coughing, sneezing, choking sensation, hoarseness, chest pains, and headache. Ingestion may cause nausea, vomiting, diarrhea, abdominal pain, decreased motor function, thirst, difficulty swallowing, salivation, and urine discoloration. Skin contact may cause irritation and skin discoloration. Eye contact may cause irritation. May enter lungs if swallowed or vomited. May affect central nervous system and eyes. Prolonged or repeated exposure may affect the liver, respiratory system, kidneys, and central nervous system; may cause reproductive effects, birth defects, developmental effects, mutagenic effects, tooth decay, dermatitis, allergic reactions, conjunctivitis, and cancer.

Immediate Medical Care/ Special Treatment: Get medical attention if you feel unwell or are concerned. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, dry powder, alcohol resistant foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream, as it may scatter and spread fire.

Hazardous Combustion Corrosive and/or toxic fumes.

Specific Hazards: Excessive thermal conditions may yield hazardous combustion products listed above. Contact with metals may produce hazardous concentrations of hydrogen gas.

Special Protective Equipment/ Precautions for Firefighters: As in any fire, wear MSHA/NIOSH approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Limit exposure to air. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area. Store in a segregated and approved area away from heat and incompatible materials (see Section 10). Store in original container. Do not store in metallic containers. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Water:	No information found.
Potassium Chloride:	No information found.
Formaldehyde:	ACGIH (TWA): 0.3 ppm OSHA (TWA): 0.75 ppm OSHA (STEL): 2 ppm NIOSH (TWA): 0.016 ppm NIOSH (CEIL): 0.1 ppm

Methanol:	ACGIH (TWA):	200 ppm
	ACGIH (STEL):	250 ppm
	OSHA (TWA):	200 ppm
	NIOSH (TWA):	200 ppm
	NIOSH (CEIL):	250 ppm
Hydrochloric Acid:	OSHA (PEL):	5 ppm
	ACGIH (TLV):	2 ppm

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance:	Colorless, transparent liquid.
Odor:	Mild, irritating.
Odor Threshold:	No information found.
Formula Weight:	Mixture.
pH:	1.00 ± 0.05
Melting/Freezing Point:	No information found.
Boiling Point/Range:	No information found.
Decomposition Temperature:	No information found.
Flash Point:	Not applicable.
Auto-ignition Temperature:	Not applicable.
Flammability:	Not flammable.
Flammability/Explosive Limits:	Not applicable.
Solubility:	Miscible with water.
Vapor Pressure:	No information found.
Vapor Density (Relative):	No information found.

Specific Gravity: 1.01 (Water = 1)

Evaporation Rate:	No information found.
Viscosity:	No information found.
Partition Coefficient (n-octanol/water):	No information found.

10. STABILITY AND REACTIVITY

Reactivity Data:	No information found.
Chemical Stability:	Stable under normal conditions. Sensitive to air.
Conditions to Avoid:	Excessive heat, exposure to air, incompatible materials.
Incompatible Materials:	Oxidizing agents, strong bases, metals, alkalis, organic materials, water, cyanides, sulfides, sulfites.
Hazardous Decomposition Products:	Potassium oxides, carbon oxides, hydrogen chloride vapor, hydrogen.
Possibility of Hazardous Reactions:	May react vigorously, violently, or explosively with the incompatible materials listed above. Excess thermal conditions may yield potassium oxides, carbon oxides, and hydrogen chloride vapor. Contact with metals may produce hazardous concentrations of hydrogen gas.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: May be harmful if swallowed, inhaled, or absorbed through the skin. Causes irritation to the eyes, skin, respiratory tract, and gastrointestinal tract. May enter lungs if swallowed or vomited. May affect central nervous system and eyes.

Chronic Effects: Prolonged or repeated exposure may affect the liver, respiratory system, kidneys, and central nervous system; may cause reproductive effects, birth defects, developmental effects, mutagenic effects, tooth decay, dermatitis, allergic reactions, conjunctivitis, and cancer.

Toxicological Data:

Water:	Not applicable.	
Potassium Chloride:	LD_{50} Oral, Rat:	2600 mg/kg
Formaldehyde:	LD_{50} Oral, Rat:	100 mg/kg
	LD_{50} Dermal, Rabbit:	270 mg/kg
	LC_{50} Inhalation, Rat:	0.578 mg/L 4 h Corrosive to skin and eyes based on animal data.

May cause mutagenic effects based on animal data.
May cause adverse reproductive effects based on animal data.
May cause skin sensitization based on human and animal data.

	Methanol:	LD_{50} Oral, Rat:	5628 mg/kg
		LD_{50} Dermal, Rabbit:	15,800 mg/kg
		LC_{50} Inhalation, Rat:	83.2 mg/L 4 h
		LDL Oral, Human:	143 mg/kg
		May cause adverse reproductive effects based on human and animal data.	
	Hydrochloric Acid:	LD_{50} Oral, Rat:	700 mg/kg
		LD_{50} Dermal, Rabbit:	> 5010 mg/kg
		LC_{50} Inhalation, Rat:	2.32 mg/L 4 h
		Corrosive to skin and eyes based on animal data.	

Symptoms of Exposure: Irritation, coughing, sneezing, choking sensation, hoarseness, chest pains, headache, decreased motor function, skin discoloration, urine discoloration, nausea, vomiting, diarrhea, abdominal pain, thirst, difficulty swallowing, salivation.

Carcinogenic Effects: This product may cause cancer.

OSHA: Formaldehyde: Carcinogen

ACGIH:
Formaldehyde: A2 – Suspected human carcinogen
Hydrochloric Acid: A4 – Not classifiable as a human carcinogen

IARC:
Formaldehyde: 1 – Carcinogenic to humans Hydrochloric Acid: 3 – Not classifiable for human

NTP: Formaldehyde: Known human carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

Water:

Not applicable.

Potassium Chloride:

EC_{50}, Water Flea (Daphnia magna):	440 mg/L 48 h
LC_{50}, Fathead Minnow (Pimphales promelas):	880 mg/L 96 h

Formaldehyde:

EC_{50}, Water Flea (Daphnia magna):	2 mg/L 48 h
LC_{50}, Fathead Minnow (Pimphales promelas):	23 mg/L 96 h
LC_{50}, Rainbow Trout (Oncorhynchus mykiss):	18 mg/L 96 h

Methanol:

EC_{50}, Water Flea (Daphnia magna):	> 10,000 mg/L 48 h
LC_{50}, Fathead Minnow (Pimphales promelas):	> 100 mg/L 96 h

Hydrochloric Acid:

LC_{50}, Western Mosquitofish (Gambusia affinis):	282 mg/L 96 h

Persistence and Degradability: Product is expected to be readily biodegradable and unlikely to bioaccumulate.

Environmental Effects: May be harmful to aquatic organisms. May leach into groundwater. Avoid exposure to the environment.

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers.

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: D002: Waste Corrosive Material (pH ≤ 2 or pH ≥ 12.5 or corrosive to steel)

14. TRANSPORT INFORMATION

DOT: Not regulated.

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is not considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302:
Formaldehyde: Reportable Quantity: 500 lb Hydrogen Chloride: Reportable Quantity: 5000 lb

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	No
Immediate Hazard	No
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

Section 313: De Minimis Concentration: Formaldehyde: 0.1%; Methanol: 1.0%; Hydrogen Chloride: 1.0%

CERCLA Reportable Quantities: Formaldehyde: 100 lb; Methanol: 5000 lb; Hydrochloric Acid: 5000 lb

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

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