

SAFETY DATA SHEET

DPD4 Buffer Solution

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS regulations

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **DPD4 Buffer Solution**
PRODUCT CODE: 970-210-0121
PRODUCT DESCRIPTION: For water testing applications only
U.N. NUMBER: UN1824
U.N. DANGEROUS GOODS CLASS: Sodium Hydroxide Solution, Class 8, PGII
SUPPLIER/MANUFACTURER'S NAME: **Blue I Water Technologies LTD**
18 Hamelacha St, Rosh Ha'ayin 4809148
ADDRESS: ISRAEL P.O.Box 11433
EMERGENCY PHONE: 972-976-8004
BUSINESS PHONE: 972-976-8004 (For product information)
WEB SITE: www.blueitechnologies.com
DATE OF PREPARATION: November 12, 2013
DATE OF LAST REVISION: November 12, 2013

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

PRODUCT DESCRIPTION: This product is a colorless liquid with no odor.

HEALTH HAZARDS: Harmful if ingested. May cause irritation to skin and eyes upon contact. Inhalation of spray or mist may cause respiratory irritation

FLAMMABILITY: This product is a Non-Flammable product with a flash point greater than 200°F.

ENVIRONMENTAL EFFECTS: The Environmental effects of this product have not been investigated, however this product contains ingredients that may cause adverse effects to aquatic life.

US DOT SYMBOL(S)



CANADA (WHMIS) SYMBOL(S)



GHS HAZARD SYMBOL(S)



Signal Word: **Danger!**

COMPONENTS DETERMINING HAZARDS:

Tri-Sodium Citrate, Potassium Iodide, Sodium Hydroxide, EDTA Disodium Salt

GHS HAZARD CLASSIFICATION(S):

Acute Oral Toxicity Category

4 Eye Irritant Category 2

STOT SE Category 3

Skin Corrosive Category 1A

HAZARD STATEMENTS:

Harmful if swallowed

Causes serious skin burns and eye damage
May cause respiratory irritation

PRECAUTIONARY STATEMENTS:

Wear protective gloves/protective clothing/eye protection
Do not breathe mist/spray

Use only in a well ventilated area
Wash hands thoroughly after handling

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE:

INHALATION: Inhalation of mist/spray may cause respiratory irritation.

EYE CONTACT: Direct eye contact can cause irritation with redness, tearing and blurred vision. Possible serious eye damage.

SKIN CONTACT: May cause skin irritation with possible skin burns.

INGESTION: Ingestion of this product can cause chemical burns of mouth and throat. Causes severe pain, nausea, vomiting and diarrhea.

SAFETY DATA SHEET

DPD4 Buffer Solution

CHRONIC: Prolonged or repeated contact with product and poor hygiene conditions may result in skin dryness or dermatitis.

TARGET ORGANS: ACUTE: Eye, Skin, Respiratory System CHRONIC: Skin

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDS DISCLOSURE: This product does contain known hazardous materials in reportable levels as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200. As defined under Sara 311 and 312, this product contains known hazardous materials.

HAZARDOUS INGREDIENTS:	CAS #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Deionized Water	7732-18-5	70 – 80%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Tri-Sodium Citrate	6132-04-3	10 – 20%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Potassium Iodide	7681-11-0	1 – 10%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/37/38
Sodium Hydroxide	1310-73-2	<5.5%	HAZARD CLASSIFICATION: [C] Corrosive RISK PHRASES: R35
EDTA Disodium Salt	6381-92-6	0.01 – 0.1%	HAZARD CLASSIFICATION: [Xn] Harmful RISK PHRASES: R22

Each of the other components present are less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens)

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format.

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and SDS to health professional with contaminated individual.

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention immediately.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing skin disorders should avoid contact with this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT:

AUTOIGNITION TEMPERATURE: FLAMMABLE LIMITS (in air by volume, %): FIRE

EXTINGUISHING MATERIALS: UNUSUAL FIRE AND EXPLOSION HAZARDS:

Explosion Sensitivity to Mechanical Impact:

Explosion Sensitivity to Static Discharge:

SPECIAL FIRE-FIGHTING PROCEDURES:
NFPA Rating System



>200°F

Not Established

Lower (LEL): Not Established Upper (UEL): Not Established

Dry chemical, carbon dioxide, foam or water spray. None known

Not Sensitive.

Not Sensitive

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.

SAFETY DATA SHEET

DPD4 Buffer Solution

If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations. Contain and recover if possible. Cover spilled product with sand, earth or other non-combustible absorbent material. Pickup spilled material immediately and place in appropriate containers. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

Do not discharge to sewers and surface waters. Notify authorities if entry occurs.

U.S. Regulations (CERCLA) requires reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product on you. Wash thoroughly after handling this product. Use in a well-ventilated location.

STORAGE AND HANDLING PRACTICES: Store containers in a cool, dry location. Keep away from sources of ignition. Keep container tightly closed when not in use. Protect from physical damage.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA
Deionized Water	7732-18-5	Not Listed	Not Listed
Tri-Sodium Citrate	6132-04-3	Not Listed	Not Listed
Potassium Iodide	7681-11-0	Not Listed	Not Listed
Sodium Hydroxide	1310-73-2	Not Listed	2 mg/m ³
EDTA Disodium Salt	6381-92-6	Not Listed	Not Listed

Currently, International exposure limits are not established for all the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapors.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Not normally required when using this product. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93.

EYE PROTECTION: Wear safety glasses or chemical goggles as appropriate where splashing is possible. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Wear chemical resistant gloves as appropriate to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent skin contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of U.S., Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:
APPEARANCE & ODOR:

Liquid
Colorless liquid with no odor.

SAFETY DATA SHEET

DPD4 Buffer Solution

ODOR THRESHOLD (PPM):	None
VAPOR PRESSURE (mmHg):	Not Available
VAPOR DENSITY (AIR=1):	Not Available
EVAPORATION RATE (nBuAc = 1):	Not Available
BOILING POINT (C°):	Not Available
FREEZING POINT (C°):	Not Available
pH:	13.5
SPECIFIC GRAVITY 20°C: (WATER =1)	>1
SOLUBILITY IN WATER (%)	Completely miscible
VOC:	None

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: When heated to decomposition this product produces oxides of carbon and sodium oxide, sodium peroxide fumes

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong acids. **HAZARDOUS POLYMERIZATION:** Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is available for the following components: CAS# 6132-04-3

No LD50 Data Available

CAS# 1310-73-2

No LD50 Data Available

SUSPECTED CANCER AGENT: None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore are not considered to be, nor suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to skin, respiratory system and eyes. **SENSITIZATION OF PRODUCT:** Ingredients in this product are not considered a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: No information available

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No specific data is available for this product, however this product is expected to be readily biodegradable

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No data available

EFFECT OF CHEMICAL ON AQUATIC LIFE: No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations.

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Sodium Hydroxide Solution

HAZARD CLASS NUMBER and DESCRIPTION: Class 8

Corrosive **UN IDENTIFICATION NUMBER:** UN1824

PACKING GROUP: PGII

DOT LABEL(S) REQUIRED: Corrosive

SAFETY DATA SHEET

DPD4 Buffer Solution

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2012): 154

MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is classified as Hazardous Material, per U.S. DOT regulations, under 49 CFR 172.101. **TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:**

This product is classified as Dangerous Goods, per regulations of Transport Canada. **INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):**

This product is classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is classified as Dangerous Goods by the International Maritime Organization.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: No Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): CAS# 1310-73-2: final RQ = 1000 pounds (454 kg)

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): None of the ingredients are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and SDS requirements of the Workplace Hazardous Materials Information System (WHMIS). Class D2B Materials having other toxic effects and Class E Corrosive material.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt
Korean Existing Chemicals List (ECL):	Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or Exempt
Swiss Giftliste List of Toxic Substances:	Listed or Exempt
U.S. TSCA:	Listed

SECTION 16 - OTHER INFORMATION

GHS MSDS Compliance PLUS

Disclaimer:

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Blue I Water Technologies. The data on this sheet is related only to the specific material designated herein. Blue I Water Technologies assumes no legal responsibility for use or reliance upon this data.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.