

# SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the American National Standards Institute (Z400.1, 1998), U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200), and equivalent state Standards. It has also been developed in accordance with the Canadian Workplace Hazardous Materials Standard and the United Nations Globally Harmonized System of Classification of Chemicals. Refer to Section 16 of this document for the definition of terms and abbreviations.

## 1. PRODUCT IDENTIFICATION

**PRODUCT:** **Blue Devil Test Kit: B7770**  
**PRODUCT USE:** Testing of Pools and Spas  
**COMPOSITION:** **This kit is comprised of the following products:**

- CYA Reagent/Cyanuric Acid Test Solution
- Solution #1: OTO Bromine Chlorine Test
- Solution # 2 Phenol Red pH Test
- Solution #3 Acid Demand & Total Alkalinity Test
- Solution # 4 Chlorine Neutralizer
- Solution #5 Total Alkalinity Test
- Solution # 6 Base Demand Test
- Calcium Hardness Tablets

This SDS has been prepared to address the hazards associated with all components of this test kit, with the hazards listed specifically in each section as they pertain to a particular item.

**PRODUCT USE:** Maintenance of Pools and Spas  
**USES ADVISED AGAINST:** Any off-label use.  
**MANUFACTURER/**  
**SUPPLIER/DISTRIBUTOR:** **Valterra Products, LLC**  
**ADDRESS:** 15230 San Fernando Mission Blvd.; Suite 107  
Mission Hills, CA 91345  
**BUSINESS PHONE #:** 818-898-1671  
**EMERGENCY PHONE #:** CHEMTREC:1-800-255-3924; 1-703-527-3887

*These products are sold to consumers in containers of relatively small volume. This SDS has been developed to address safety concerns affecting those individuals working in warehouses and other places where large numbers of these containers are stored, as well as those affecting potential users of this product in industrial /occupational or manufacturing settings.*

## 2. HAZARD IDENTIFICATION

### CYANURIC ACID TEST SOLUTION

**CLASSIFICATION:** Acute Toxicity – Oral (Category 5); Acute Toxicity – Dermal (Category 5); Acute Toxicity – Inhalation (Category 5).

**LABELING:**

- **Symbol:** Not applicable.
- **Signal Word:** WARNING!
- **Hazard Statement:** H303+H313+H333: May be harmful if swallowed, in contact with skin or if inhaled.
- **Precautionary Statements:** P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P302+352+312: IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell. 304+312: IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.:

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	1
Flammability	0
Physical Hazard	0
Protective Equipment	B

HMIS Personal Protective Equipment Rating: Occupational Use situations: B - Safety glasses and gloves

## 2. HAZARD IDENTIFICATION (Continued)

**WATER-BASED, NON-ACID SOLUTIONS:** The following sections describe the hazards associated with the following kit components: **Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test.**

**CLASSIFICATION:** Eye Irritant (Category 2B); Skin Irritant (Category 3); Acute Toxicity, Oral (Category 5)

**LABELING:**

**Symbol:** Not applicable.

**Signal Word:** WARNING!

**Hazard Statement:** H303: May be harmful if swallowed. H320: Causes eye irritation. 316: Causes mild skin irritation.

**Precautionary Statements:** P264: Wash skin and exposed areas thoroughly after handling. P270: Do not eat, drink or smoke when using the product. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P337+313: If eye irritation persists get medical advice/attention. P302+352+312: IF ON SKIN: Wash with plenty of water. P332+313: If skin irritation occurs: Get medical advice/attention. P301+312 +P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	1
Flammability	0
Physical Hazard	0
Protective Equipment	B

HMIS Personal Protective Equipment Rating: Occupational Use situations: B - Safety glasses and gloves

**WATER-BASED, ACID SOLUTIONS:** The following sections describe the hazards associated with the following kit components: **Solution #1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test.**

### GLOBALLY HARMONIZED SYSTEM REVIEW:

**CLASSIFICATION:** Skin corrosion (Category 1B); Serious eye damage (Category 1);

**LABELING:**

**Symbol:**

**Signal Word:** DANGER!

**Hazard Statement:** H314: Causes severe skin burns and eye damage. H318: Causes serious eye damage.

**Precautionary Statements:** P261: Avoid breathing vapors, mists, or sprays. P264: Wash skin thoroughly after handling. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P363: Wash contaminated clothing before reuse. P405 Store locked up. P406 Store in corrosive resistant stainless-steel container with a resistant inner liner. P501 Dispose of contents/ container to an approved waste disposal plant.

**OTHER HAZARDS:** Prolonged or repeated skin contact may cause dermatitis: **Solution 1 OTO Bromine Chlorine Test** - This product contains a small amount of Orthotolidine, a chemical known to the state of California to cause cancer.



### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	3
Flammability	0
Physical Hazard	0
Protective Equipment	B

HMIS Personal Protective Equipment Rating: Occupational Use situations: B - Safety glasses and gloves

**TABLETS:** The following sections describe the hazards associated with the following kit components: **Calcium Hardness Tablets.**

**GHS HAZARD CLASSIFICATION:** Acute Toxicity- Oral (Category 4); Eye Irritation (Category 2A).

**LABELING:**

- **Pictogram:** To the right -
- **Signal Word:** Warning.
- **Hazard Statement:** H302: Harmful if swallowed. H320: Causes serious eye irritation.
- **Precautionary Statements:** P102: Keep out of reach of children. P264: Wash face, hands and any exposed skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear eye/face protection.



## 2. HAZARD IDENTIFICATION (Continued)

**TABLETS (Continued):** The following sections describe the hazards associated with the following kit components: **Calcium Hardness Tablets.**

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	1*	* As anticipated, in tablet form and coated. Caution should be taken with broken tablets and dust; corrosive eye and skin damage is possible if there is prolonged contact.
Flammability	0	
Physical Hazard	0	
Protective Equipment	B	HMIS Personal Protective Equipment Rating: Occupational Use situations: B - Safety glasses and gloves (if skin or eye contact is a possibility)
Protective Equipment	B	

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

**WATER-BASED SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution #3 Acid Demand & Total Alkalinity Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution.

COMPONENT	CAS NUMBER	% (w/w)	Kit Component
Phenol Red	34487-61-1	<0.1%	Solution #2 Phenol Red PH Test
Hydrochloric acid	7647-01-0	<5.0%	Solution #1 OTO Bromine Chlorine Test Solution #3 Acid Demand & Total Alkalinity Test
Orthotolidine	612-82-8	<0.1%	Solution #1 OTO Bromine Chlorine Test
Sodium Thiosulfate	7772-98-7	<0.1%	Solution # 4 Chlorine Neutralizer
Bromophenol blue, sodium salt	62625-2809	<0.1%	Solution # 5 Total Alkalinity Test
Sodium Bicarbonate	144-55-8	<1.0%	Solution # 6 (Base Demand Test)
Melamine	108-78-1	<0.1%	Cyanuric Acid Test Solution
Mercuric Acetate	1600-27-7	<0.1%	
Water	7732-18-5	>98%	Comprises the aqueous component of all water-based solutions in B7770 Test Kit items.
Other ingredients that are below 1.0% in concentration (or below 0.1% in concentration for carcinogens). All ingredients are listed per the requirements of regulations pertinent to SDS preparation.			

### TABLETS: Calcium Hardness Tablets.

COMPONENT	CAS NUMBER	% (w/w)	Kit Component
Lithium Hydroxide	1310-65-2	10%	Calcium Hardness Tablets
Sodium Carbonate	497-19-8	10-15%	
Other ingredients that are buffers, fillers, tableting aids, and pH adjusters. All hazardous ingredients are listed per the requirements of regulations pertinent to SDS preparation (i.e., more than 1% in concentration, or more than 0.1% in concentration for carcinogens).			

## 4. FIRST AID MEASURES

### ALL TEST KIT COMPONENTS):

#### FIRST AID:

- **Eyes:** Hold contaminated eyes open and flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention if eye irritation occurs.
- **Skin:** Flush area with warm, running water. Continue rinsing with water for at least 15 minutes, if any evidence of redness or irritation occurs. Seek medical attention if skin irritation persists.
- **Inhalation:** Obtain fresh air. If necessary, blow nose. Seek medical attention if irritation occurs.
- **Ingestion:** If it is accidentally ingested, rinse mouth. Contact professional medical personnel or the local poison control center for additional guidance.

## 4. FIRST AID MEASURES

### ACUTE HEALTH EFFECTS:

- **CYANURIC ACID TEST SOLUTION:**
  - May be harmful if swallowed, in contact with skin or if inhaled.
- **WATER-BASED, NON-ACID SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution.
  - May be harmful if swallowed. Causes eye irritation. Causes mild skin
- **WATER-BASED, ACID SOLUTIONS:** Solution #1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test.
  - Causes severe skin burns and eye damage. Causes serious eye damage.
- **TABLETS:** Calcium Hardness Tablets
  - Harmful if swallowed. Causes serious eye irritation.

### CHRONIC HEALTH EFFECTS: None reported.

- **CYANURIC ACID TEST SOLUTION**
  - This product contains a small amount of Mercuric Acetate. Exposure to mercury compounds may be harmful to unborn fetuses.
- **SOLUTION #1 OTO CHLORINE BROMINE TEST**
  - This product contains a small amount of Orthotolidine. Orthotolidine may cause cancer.

### TARGET ORGANS: As follows:

- **CYANURIC ACID TEST SOLUTION:**
  - Skin.
- **WATER-BASED, NON-ACID SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test
  - Skin, eyes
- **WATER-BASED, ACID SOLUTIONS:** Solution #1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test.
  - Skin, eyes.
- **TABLETS:** Calcium Hardness Tablets
  - Harmful if swallowed. Causes serious eye irritation.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate overexposure.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None reported.

## 5. FIRE-FIGHTING MEASURES

### ALL TEST KIT COMPONENTS (Unless otherwise noted):

**NFPA FLAMMABILITY CLASSIFICATION:** Not flammable.

**RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Water Jet, Dry Powder, Foam, Carbon Dioxide, or any other.

**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**UNUSUAL HAZARDS IN FIRE SITUATIONS:** When involved in a fire, this material may produce irritating vapors and toxic gases (e.g., carbon monoxide, carbon dioxide, oxides of sulfur).

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

**RECOMMENDATIONS TO FIREFIGHTERS:** Wear Self Contained Breathing Apparatus and full protective equipment for fire response. Move containers from fire area if it can be done without risk to personnel. Contaminated equipment should be rinsed thoroughly with water before returning to service.



NFPA RATING

**NFPA RATING, GROUP 1:** The NFPA Rating on the top left pertains to the following kit components: Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution; DPD #1 Test Tablets; DPD #3 Test Tablets.



NFPA RATING

**NFPA RATING, GROUP 2:** The NFPA Rating on the right pertains the following kit components: Solution #1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test.

## 6. ACCIDENTAL RELEASE MEASURES

### ALL TEST KIT COMPONENTS:

**RESPONSE TO INCIDENTAL RELEASES:** Wear gloves and safety glasses when cleaning-up spills. Use caution during clean-up; contaminated floors and items may be slippery.

**RESPONSE TO NON-INCIDENTAL RELEASES:** Respond to non-incident chemical releases of this product, such as the simultaneous destruction of several pallets, by clearing the impacted area and contacting appropriate emergency personnel.

**ENVIRONMENTAL PRECAUTIONS:** Avoid response actions that can cause a release of a significant amount of the substance (1 liter/1 kg or more) into the environment.

### SPECIFIC COMPONENTS:

- **WATER-BASED, NON-ACID SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution.
  - **RESPONSE PROCEDURES FOR ANY RELEASE:** Sponge spilled compound with a damp polypad or other absorbent. **SPILL RESPONSE EQUIPMENT:** Polypad or other absorbent material, if needed.
- **WATER-BASED, ACID SOLUTION:** Solution #1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test
  - **RESPONSE PROCEDURES FOR ANY RELEASE:** Sponge spilled compound with a damp polypad or other absorbent. If needed, contaminated areas or equipment may be neutralized with dilute alkaline solutions of soda ash (sodium carbonate, Na<sub>2</sub>CO<sub>3</sub>), or lime (calcium oxide, CaO). **SPILL RESPONSE EQUIPMENT:** Polypad or other absorbent material; Neutralizing agent (e.g., sodium carbonate or lime), if needed.
- **TABLETS:** Calcium Hardness Tablets
  - **RESPONSE PROCEDURES FOR ANY RELEASE:** If necessary, sweep up spilled tablets or pick up tablets with gloved hands. **SPILL RESPONSE EQUIPMENT:** Broom and dustpan.

## 7. HANDLING AND STORAGE

### ALL TEST KIT COMPONENTS:

**HYGIENE PRACTICES:** Keep out of reach of children. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of vapors, mists and sprays (or dusts and particulates, in the case of the tablet components). Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up any spilled product immediately.

**HANDLING RECOMMENDATIONS:** Only small quantities of this product are used to test pools and spas. Employees must be appropriately trained to use this product safely as needed.

**STORAGE RECOMMENDATIONS:** Ensure all containers are correctly labeled. Store container in cool, dry place away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals (See Section 10, Stability and Reactivity).

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures).

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

### ALL TEST KIT COMPONENTS:

**ENGINEERING CONTROLS:** Use this product in well-ventilated environment.

**RESPIRATORY PROTECTION:** None needed under routine circumstances of use.

**HAND PROTECTION:** Rubber, latex, or neoprene gloves should be used when prolonged contact is anticipated.

**EYE PROTECTION:** Splash goggles or safety glasses with side shield are recommended if splashes or sprays are anticipated.

**BODY PROTECTION:** None needed under typical situations of use or handling.

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

### U.S. NATIONAL EXPOSURE LIMITS:

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Mercuric Acetate; (as Hg; listed under Mercury, inorganic compounds) ( <b>Cyanuric Acid Test Solution</b> )	TWA = 0.025 mg/m <sup>3</sup> , Skin	TWA 0.1 mg/m <sup>3</sup>	TWA = 0.05 mg/m <sup>3</sup> (Vapor, Skin) C = 0.1 mg/m <sup>3</sup>	CAL PEL: TWA = 0.025 mg/m <sup>3</sup> (Vapor, Skin); C = 0.1 mg/m <sup>3</sup>  ACGIH BEI: Total inorganic mercury in urine; prior to shift – 35 µg/g creatinine. Total inorganic mercury in urine; end of shift at end of workweek – 15 µg/g creatinine.
Hydrochloric acid ( <b>Solution #1 OTO Bromine Chlorine Test/Solution #3 Acid Demand &amp; Total Alkalinity Test</b> ) (for Hydrogen Chloride)	C = 2 ppm	C = 5 ppm	C = 5 ppm	CAL PEL: TWA = 0.3 ppm/0.45 mg/m <sup>3</sup> ; C = 2 ppm
ALL OTHER CHEMICAL COMPONENTS LISTED IN SECTION 3	NE	NE	NE	NE

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**WATER-BASED, NON-ACID SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution.

**PHYSICAL STATE:** Liquid.

**COLOR:** Various.

**ODOR:** None.

**pH:** 5.0-8.0.

**BOILING POINT:** Approximately 100°C (212°F).

**MELTING POINT:** Approximately 0°C (32 °F).

**REFRACTIVE INDEX:** Not applicable.

**VISCOCITY:** ≈ 0.890 cP at about 25 °C.

**FLASH POINT:** Not applicable.

**LOWER EXPLOSIVE LIMIT (LEL):** Not applicable.

**UPPER EXPLOSIVE LIMIT (UEL):** Not applicable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

**VAPOR PRESSURE:** ≈17.5 mmHg at 20°C.

**VAPOR DENSITY (air = 1):** ≈17.3 g/m<sup>3</sup> at 20°C.

**SPECIFIC GRAVITY (water = 1):** Approximately 1.0.

**EVAPORATION RATE (water = 1):** ≈1.0

**COEFFICIENT OIL/WATER DISTRIBUTION**

**(PARTITION COEFFICIENT):** Not established.

**WATER-BASED, ACID SOLUTION:** Solution #3 Acid Demand & Total Alkalinity Test; Same as above, except pH is below 2.0.

**TABLETS:** Calcium Hardness Tablets.

**PHYSICAL STATE:** Solid; tablets (100 mg).

**COLOR:** Light pink with specks.

**ODOR:** Odorless.

**pH:** 12 (1 tablet in 10 mL water).

**BOILING POINT:** Not determined.

**MELTING POINT:** Not determined.

**REFRACTIVE INDEX:** Not determined.

**VISCOCITY:** Not determined.

**FLASH POINT:** Not applicable.

**LOWER EXPLOSIVE LIMIT (LEL):** Not applicable.

**UPPER EXPLOSIVE LIMIT (UEL):** Not applicable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

**VAPOR PRESSURE:** Not determined.

**VAPOR DENSITY (air = 1):** Not determined.

**RELATIVE DENSITY (water = 1):** Not determined.

**EVAPORATION RATE (water = 1):** Not determined.

**COEFFICIENT OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT):** Not established.

**SOLUBILITY:** Soluble in water.

**EXPLOSIVE PROPERTIES:** Not applicable.

**OXIDIZING PROPERTIES:** Not applicable.

**VOLATILE ORGANIC COMPOUNDS:** Not applicable.



## 10. STABILITY AND REACTIVITY

### ALL TEST KIT COMPONENTS:

**RELATIVE STABILITY (AT STANDARD TEMPERATURES AND PRESSURES):** Normally stable.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**HAZARDOUS CHEMICAL DECOMPOSITION PRODUCTS:** Not applicable.

**CONDITIONS TO AVOID:** Avoid contact with incompatible chemicals.

### SPECIFIC TEST KIT COMPONENTS:

- **WATER-BASED, NON-ACID SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution.
  - **INCOMPATIBILITIES:** Strong oxidizers, strong acids and compounds that react with water.
- **WATER-BASED, ACID SOLUTION:** Solution #1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test.
  - **INCOMPATIBILITIES:** Hydrochloric acid solutions, such as this product, are highly reactive with strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. Incompatible with materials such as cyanides, sulfides, sulfites, and formaldehyde.
- **TABLETS:** Calcium Hardness Tablets.
  - **INCOMPATIBILITIES:** Strong acids.

## 11. TOXICOLOGY INFORMATION

**CARCINOGENICITY STATUS:** The following table summarizes the carcinogenicity listing for the components of this product. "NO" indicates that the substance is not considered to be, or suspected to be, a carcinogen by the listed agency.

CHEMICAL	IARC	NTP	NIOSH	OSHA	OTHER	Kit Component
Mercuric Acetate	IARC 3; Unclassifiable as Human Carcinogen	NO	NO	NO	A4; Not Classifiable as Human Carcinogen, ACGIH MAK-3B: Substances in which in vitro or animal tests yield some evidence of carcinogenicity, but no conclusive rating can be given.	CYA Acid Test Solution
Hydrochloric acid (for Hydrogen Chloride)	IARC 3; Unclassifiable as Human Carcinogen	NO	NO	NO	A4; Not Classifiable as Human Carcinogen, ACGIH	Solution #1 OTO Bromine Chlorine Test  Solution #3 Acid Demand & Total Alkalinity Test
Orthotolidine	IARC-2B: Possibly Carcinogenic to Humans	NO	NO	NO	California Proposition 65	Solution #1 OTO Bromine Chlorine Test
ALL OTHER CHEMICAL COMPONENTS LISTED IN SECTION 3	NO	NO	NO	NO	NO	Various

**REPRODUCTIVE TOXICITY INFORMATION:** The chemicals in the components of this kit listed below have the following reproductive toxicity data; if not specifically listed, no such data currently exist for the constituent.

**Melamine (Cyanuric Acid Test Solution):** May offer a possible risk of impaired fertility under certain circumstances of exposure. Known to cause reproductive and tumorigenic effects in laboratory animals.

**Mercuric Acetate (Cyanuric Acid Test Solution):** Exposure to mercury compounds may be harmful to unborn fetuses. Known to cause reproductive and tumorigenic effects in laboratory animals.

**Hydrochloric Acid (Solution 1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test):** Laboratory tests of hydrochloric acid show the following teratogenicity data: Embryo or Fetus: Stunted fetus, Inhalation, rat TCL0=450 mg/m<sup>3</sup>/1H; Specific Developmental Abnormalities: homeostatis, ihl-rat TCL0=450 mg/m<sup>3</sup>/1H (female 1 days pre-mating).

## 11. TOXICOLOGY INFORMATION (Continued)

**TOXICOLOGY DATA:** The following data are available for the chemical constituents of this product's components. Data are given only for substances present in greater than 1 percent concentration within each kit component.

### HYDROCHLORIC ACID

(Solution 1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test)

Inhalation, mouse: LC50 = 1108 ppm/1 hour;  
Inhalation, mouse: LC50 = 8300 mg/m<sup>3</sup>/30 minutes  
Inhalation, rat: LC50 = 3124 ppm/1 hour  
Oral, rabbit: LD50 = 900 mg/kg

### ORTHOTOLIDINE

(Solution 1 OTO Bromine Chlorine Test)

Oral, rat LC50 = 404 mg/kg

### LITHIUM HYDROXIDE

(Calcium Hardness Tablets)

LD50 (Oral, Mouse) = 363 mg/kg  
LD50 (Oral, Rat) = 210 mg/kg  
LC50 (Inhalation, Rat) = 4 hours, 3.4 mg/m<sup>3</sup>

### SODIUM CARBONATE

(Calcium Hardness Tablets)

LD50 (Oral, Rat) = 4,090 mg/kg  
LC50 (Inhalation, Rat) = 2 hours, 2,300 mg/m<sup>3</sup>

**DEGREE OF IRRITATION:** Solution 1 OTO Bromine Chlorine Test Solution #3 Acid Demand & Total Alkalinity Test - Severely irritating to corrosively damaging, depending on the duration of exposure. All Other Test Kit Components: Mild to moderate, depending on duration of exposure.

### ALL TEST KIT COMPONENTS:

- **SENSITIZATION POTENTIAL:** Not applicable.
- **MUTAGENIC EFFECTS:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable. Animal data is suggestive that prolonged exposure to Ethylene glycol is harmful to kidneys.
- **ASPIRATION HAZARD:** Not applicable.

## 12. ECOLOGICAL INFORMATION

**WATER-BASED, NON-ACID SOLUTIONS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution.

- **TOXICITY TO TERRESTRIAL LIFE:** Based on available data, this product is not anticipated to be harmful to contaminated plants or animals. Prudent practice would be to minimize all releases to the environment.
- **TOXICITY TO AQUATIC LIFE:** Based on available data, this product is not anticipated to be harmful to contaminated aquatic plants or animals. Prudent practice would be to minimize all releases to the environment.
- **MOBILITY, PERSISTENCE, AND DEGRADABILITY:** This product contains is mobile and presents limited hazards to the environment; however, good hygiene practices should be implemented to prevent all accidental releases to the environment.
- **BIOACCUMULATION AND BIOCONCENTRATION POTENTIAL:** It is not anticipated that this product will bioaccumulate or bioconcentrate significantly in the environment.

**WATER-BASED, ACID SOLUTION:** Solution 1 OTO Bromine Chlorine Test; Solution #3 Acid Demand & Total Alkalinity Test.

- **TOXICITY TO TERRESTRIAL LIFE:** This solution is an acid. Based on available data, this product may be harmful to contaminated plants or animal, upon exposures to large volumes or of prolonged duration.
- **TOXICITY TO AQUATIC LIFE:** Based on available data, this product may be harmful to contaminated aquatic plants or animals, upon exposures to large volumes. Because this product is an acid, releases of relatively large volumes of this product into the environment can lower the pH and severely impact aquatic life in the adjacent area.
- **MOBILITY, PERSISTENCE, AND DEGRADABILITY:** When released into the soil, the components of this product are not expected to biodegrade. When released into the soil, hydrochloric acid may leach into groundwater.
- **BIOACCUMULATION AND BIOCONCENTRATION POTENTIAL:** It is not anticipated that this product will bioaccumulate or bioconcentrate significantly in the environment.
- **BIOACCUMULATION AND BIOCONCENTRATION POTENTIAL:** It is not anticipated that this product will bioaccumulate or bioconcentrate significantly in the environment.



## 12. ECOLOGICAL INFORMATION (Continued)

### TABLETS: Calcium Hardness Tablets.

- **TOXICITY TO TERRESTRIAL LIFE:** Based on available data, this may be harmful to contaminated plants or animals.
- **TOXICITY TO AQUATIC LIFE** Based on available data, this may be harmful or fatal to contaminated aquatic plants or animals.
- **COMPONENT AQUATIC TOXICITY DATA:** The following data are available for components of this product.  
**SODIUM CARBONATE**  
LC50 (Lepomis macrochirus) - 300 mg/L - 96 hours  
LC50 (Pimephales promelas) – 310-12200 mg/L - 96 hours  
EC50 (Daphnia magna) - 265 mg/L - 48 hours  
EC50 (Nitzschia)- 242 mg/L - hours
- **MOBILITY, PERSISTENCE, AND DEGRADABILITY:** The components of the product are ultimately biodegradable. Good hygiene practices should be implemented to prevent all accidental releases to the environment.
- **BIOACCUMULATION AND BIOCONCENTRATION POTENTIAL:** It is not anticipated that this product will bioaccumulate or bioconcentrate significantly in the environment.

## 13. DISPOSAL CONSIDERATIONS

### ALL TEST KIT COMPONENTS:

**WASTE HANDLING RECOMMENDATIONS:** Prepare, transport, treat, store, and dispose of waste product according to all applicable local, U.S. State and U.S. Federal regulations, the applicable Canadian standards.

- **WATER-BASED, NON-ACID SOLUTIONS and TABLETS:** Solution # 2 Phenol Red pH Test; Solution # 4 Chlorine Neutralizer; Solution #5 Total Alkalinity Test; Solution # 6 Base Demand Test; Cyanuric Acid Test Solution; DPD #1 Test Tablets; DPD #3 Test Tablets.
  - **EPA RCRA WASTE CODE:** Not applicable.
- **WATER-BASED, ACID SOLUTION:** Solution #3 Acid Demand & Total Alkalinity Test.
  - **EPA RCRA WASTE CODE:** Not applicable (if household waste); otherwise, D002 (Characteristic, Corrosive).

## 14. TRANSPORT INFORMATION

### TEST KIT INFORMATION:

**DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:** This product, as it is normally shipped, meets the definition of SMALL QUANTITY EXCEPTION. As noted above, small quantities of this product's components are not subjected to other requirements of the Hazardous Materials Regulations (Subchapter C) when the maximum quantity per inner receptacle is limited to 30 mL (liquids) and meets the other conditions of small quantity exception packaging. Refer to 49 CFR 173.4 and 173.4a for specific information on packaging small quantity materials.



**LABEL:** SMALL QUANTITY EXCEPTION.

**MARINE POLLUTANT STATUS:** No component is designated as a DOT Marine Pollutant.

**CANADIAN TRANSPORTATION INFORMATION:** The small quantity exception requirements described above are also applicable for Canadian shipments.

**IATA DESIGNATION:** This product, as it is normally shipped, meets the definition of SMALL QUANTITY EXCEPTION. As noted above, small quantities of this product's components are not subjected to other requirements of the Dangerous Good Code when the maximum quantity per inner receptacle is limited to 30 mL (liquids) and meets the other conditions of small quantity exception packaging. Refer to Dangerous Goods Code Chapter 2.7 for specific information on packaging small quantity materials.

## 15. REGULATORY INFORMATION

### OTHER IMPORTANT U.S. REGULATIONS

**CERCLA REPORTING REQUIREMENTS:** Hydrochloric Acid ([Solution #1 OTO Bromine Chlorine Test](#); [Solution #3 Acid Demand & Total Alkalinity Test](#)) - 5000 lb./2270 kg RQ; **All Other Chemicals Listed in Section 3** -Not applicable.

**SARA REPORTING REQUIREMENTS:** The following reporting requirements are applicable to the components of this product:

CHEMICAL	SECTION 302 (40 CFR 355 Appendix A)	SECTION 304 (40 CFR Table 302.4)	SECTION 313 (40 CFR 372.65)
Hydrochloric Acid ( <a href="#">Solution #1 OTO Bromine Chlorine Test</a> ; <a href="#">Solution #3 Acid Demand &amp; Total Alkalinity Test</a> ); (for Hydrogen Chloride)	500 lb. TPQ (Hydrogen Chloride, gas only)	5000 lb./2270 kg RQ.	Hydrochloric acid – aerosol mist only.
Orthotolidine ( <a href="#">Solution #1 OTO Bromine Chlorine Test</a> )	NO	NO	YES
Mercuric Acetate ( <a href="#">Cyanuric Acid Test Solution</a> )	500 lb. lower threshold TPQ; 10,000 lb. upper threshold TPQ	NO	YES
ALL OTHER CHEMICALS LISTED IN SECTION 3	NO	NO	NO

**SARA SECTION 311/312 FOR PRODUCT:** Acute Toxicity; Eye Damage/Irritation.

- **[WATER-BASED, NON-ACID SOLUTIONS:](#)** [Solution # 2 Phenol Red pH Test](#); [Solution # 4 Chlorine Neutralizer](#); [Solution #5 Total Alkalinity Test](#); [Solution # 6 Base Demand Test](#); [Cyanuric Acid Test Solution](#).
  - Acute Toxicity; Eye Damage/Irritation; Skin Damage/Irritation
- **[WATER-BASED, ACID SOLUTIONS:](#)** [Solution #3 Acid Demand & Total Alkalinity Test](#).
  - Eye Damage/Irritation; Skin Damage/Irritation
- **[TABLETS:](#)** [Calcium Hardness Tablets](#)
  - Acute Toxicity; Eye Damage/Irritation

**TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.

**CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** The following products contain Proposition 65 substances:

### CYANURIC ACID TEST SOLUTION



**WARNING:** This product can expose you to Mercuric Acetate, a chemical known to the state of California to cause birth defects, and other reproductive harm. For more information, go to [www.p65Warnings.ca.gov](http://www.p65Warnings.ca.gov)

### OTO BROMINE CHLORINE TEST



**WARNING:** This product can expose you to o-Toluidine hydrochloride, a chemical known to the state of California to cause cancer. For more information, go to [www.p65Warnings.ca.gov](http://www.p65Warnings.ca.gov)

### INTERNATIONAL REGULATIONS

- **CANADIAN DSL/NDSL INVENTORY STATUS:** The components of this product are listed on the DSL/NDSL Inventory.
- **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS:** The components of this product are not on the CEPA Priority Substances Lists.
- **CANADIAN WHMIS CLASSIFICATION:** See section 2.

## 16. OTHER INFORMATION

**DATE/ SDS PREPARATION:** January 1, 2020.

**DATE/ SDS REVISION:** May 7, 2020.

**CHANGE INDICATED:** Update of regulatory information. Format changes.

### DEFINITION OF TERMS AND ABBREVIATIONS:

- **ALL SECTIONS:** OSHA: U.S. Federal Occupational Safety and Health Administration. WHMIS: Canadian Workplace Hazardous Materials Standard. GHS: Globally Harmonized System of Classification of Chemical Substances.
- **SECTION 2: HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING:** This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.
- **SECTION 3: CAS Number:** Chemical Abstract Service Number, which is used by the American Chemical Society to uniquely identify a chemical.
- **SECTION 5: NFPA:** National Fire Protection Association. **NFPA FLAMMABILITY CLASSIFICATION:** The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. **NFPA HAZARDOUS MATERIALS RATING:** This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard
- **SECTION 8: NE:** Not established. **ACGIH:** American Conference of Government Industrial Hygienists; **TWA:** Time-Weighted Average (over an 8-hour work day); **STEL:** Short-Term Exposure Limit (15-minute average, no more than 4-times daily and each exposure separated by one-hour minimally); **C:** Ceiling Limit (concentration not to be exceeded in a work environment). **PEL:** Permissible Exposure Limit. **NIOSH:** National Institute of Occupational Safety and Health; **REL:** Recommended Exposure Limit; **IDLH:** Immediately Dangerous to Life and Health Concentrations. *Note:* In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. **ppm:** Parts per Million. **mg/m<sup>3</sup>:** Milligrams per cubic meter. **mppcf:** Millions of Particles per Cubic Foot. **BEI:** Biological Exposure Limit. **CA PEL:** California Permissible Exposure Limits for Airborne Contaminants.
- **SECTION 9: pH:** Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. **FLASH POINT:** Temperature at which a liquid generates enough flammable vapors so that ignition may occur. **AUTOIGNITION TEMPERATURE:** Temperature at which spontaneous ignition occurs. **LOWER EXPLOSIVE LIMIT (LEL):** The minimal concentration of flammable vapors in air which will sustain ignition. **UPPER EXPLOSIVE LIMIT (UEL):** The maximum concentration of flammable vapors in air which will sustain ignition.
- **SECTION 11: CARCINOGENICITY STATUS:** NTP: National Toxicology Program. IARC: International Agency for Research on Cancer. **REPRODUCTIVE TOXICITY INFORMATION:** Mutagen: Substance capable of causing chromosomal damage to cells. Embryotoxin: Substance capable of damaging the developing embryo in an overexposed female. Teratogen: Substance capable of damaging the developing fetus in an overexposed female. Reproductive toxin: Substance capable of adversely affecting male or female reproductive organs or functions. **TOXICOLOGY DATA:** LDxx or LCxx: The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to assess the toxicity of chemical substances to humans. TDxx or TCxx: The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.
- **SECTION 13: RCRA:** Resource Conservation and Recovery Act. The regulations promulgated under this Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. **EPA RCRA Waste Codes:** Defined in 40 CFR Section 261.
- **SECTION 15: CERCLA:** Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and **SARA:** (Superfund Amendment and Reauthorization Act). **TSCA:** Toxic Substances Control Act. The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. **DSL/NDL:** Canadian Domestic Substances and Non-Domestic Substances Lists.