1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 210314
Product Name: K-BAC 1005
Category: Biocide
Company Name: Water Science Technologies, LLC
5520 Parkwood Circle
Bessemer, AL 35022
Phone Number:
(866)284-9244

Emergency Contact:
ChemTel, Inc. (US)
(800)255-3924
ChemTel, Inc. (Int'l)
(813)248-0585

Information:
Company EPA #: 88714

2. HAZARDS IDENTIFICATION

Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A

GHS Signal Word: Warning
GHS Hazard Phrases:
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
GHS Precaution Phrases:
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases:
P302+352 - IF ON SKIN: Wash with plenty of soap and water.
P332+313 - If skin irritation occurs, get medical advice/attention.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 - Get medical advice/attention.
P362 - Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal Phrases:
No phrases apply.

Hazard Rating System:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>D</td>
</tr>
</tbody>
</table>

HMIS:

Potential Health Effects (Acute and Chronic):

Inhalation: Harmful if inhaled. May cause respiratory tract irritation.
Skin Contact: May cause skin irritation. Harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Ingestion: Harmful if swallowed. May cause irritation of the digestive tract.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Ingredient(s)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>10222-01-2</td>
<td>2,2-Dibromo-3-nitropropionamide</td>
<td>5.22 -5.76 %</td>
</tr>
<tr>
<td>25322-68-3</td>
<td>Polyethylene glycol</td>
<td>50.0 %</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>44.3 %</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Emergency and First Aid Procedures:
- In Case of Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
- In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid.
- In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- In Case of Ingestion: Wash mouth out with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
- Note to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Pt: NA  Method Used: Estimate
Explosive Limits: LEL: No data. UEL: No data.
Autoignition Pt: NA
Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.
Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:
Use proper personal protective equipment as indicated in Section 8.

Environmental Precautions:
Avoid release to the environment.

Steps To Be Taken In Case Material Is Released Or Spilled:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:
Avoid breathing dust, mist, or vapor. Avoid contact with skin and eyes. Keep container tightly closed.

Precautions To Be Taken in Storing:
Store in a cool, dry place. Store away from incompatible material. Store away from sparks, flames.
## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Components (Chemical Name)</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>10222-01-2</td>
<td>2,2-Dibromo-3-nitrilopropionamide</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>25322-68-3</td>
<td>Polyethylene glycol</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

**Respiratory Equipment (Specify Type):** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Eye Protection:** Splash goggles and/or face shield.

**Protective Gloves:** Wear appropriate protective gloves to prevent skin exposure.

**Other Protective Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Engineering Controls (Ventilation etc.):** Use adequate ventilation to keep airborne concentrations low.

**Work/Hygienic/Maintenance Practices:** Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical States:** [ ] Gas  [X] Liquid  [ ] Solid

**Appearance and Odor:** Yellowish. chlorine-like.

**Freeze Point/Pour Point:** No data.

**Boiling Point:** > 70.00 °C (158.0 °F)

**Decomposition Temperature:** > 70.00 °C (158.0 °F)

**Autoignition Pt:** NA

**Flash Pt:** NA  Method Used: Estimate

**Explosive Limits:**
- LEL: No data.
- UEL: No data.

**Specific Gravity (Water = 1):** 1.10+/-0.05

**Vapor Pressure (vs. Air or mm Hg):** No data.

**Vapor Density (vs. Air = 1):** > 1

**Evaporation Rate:** < 1

**Solubility in Water:** soluble

**Percent Volatile:** No data.
10. STABILITY AND REACTIVITY

Reactivity: acids, Bases, Water.
Stability: Unstable [ ] Stable [ X ]
Conditions To Avoid - Instability: Light, Heat, heating to decomposition. Incompatible materials.
Incompatibility - Materials To Avoid: Strong oxidizing agents, Reducing agents, Bases.
Hazardous Decomposition Or Byproducts: Nitrogen oxides, hydrogen bromide, bromine fumes.
Possibility of Hazardous Reactions: Will occur [ ] Will not occur [ X ]
Conditions To Avoid - Hazardous Reactions:

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: Mutagenicity: Neurotoxicity: Other Studies:
CAS# 10222-01-2:
Acute toxicity, LD50, Intravenous, Mouse, 10.00 MG/KG.
Result:
Gastrointestinal: Changes in structure or function of salivary glands.
Kidney, Ureter, Bladder: Changes in tubules (including acute renal failure, acute tubular necrosis).
Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

Acute toxicity, LD50, Oral, Species: unspecified., 118.0 MG/KG.
Result:
Nutritional and Gross Metabolic: Changes in Ca.
Nutritional and Gross Metabolic: Changes in phosphorus.
Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: Phosphatases.

CAS# 10222-01-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Ingredient(s)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
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</table>
12. ECOLOGICAL INFORMATION

Results of PBT and vPvB assessment:

No data available.

CAS# 10222-01-2:
LC50, Bluegill (Lepomis macrochirus), 2.300 PPM, 96 H, Mortality.
Result:
Age Effects.
- Pesticide Ecotoxicity Database (Formerly: Environmental Effects Database (EEDB)), Office of Pesticide Programs, 2000

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: RCRA: It is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24).

Disposal: Biocide or Pesticide wastes are acutely hazardous. Improper disposal or excess product or rinseate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Biocide/Pesticide or Environmental Control Agency, or the Hazardous Waste representative at your nearest EPA Regulation Office for guidance

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated.
DOT Hazard Class:
UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Not Regulated.
UN Number:
Hazard Class: TDG Classification:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not Regulated.
UN Number: |N|
Packing Group:
IMDG MFAO Number:

IMDG EMS Page: |

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not Regulated.

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Ingredient(s)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
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This material meets the EPA Hazard Categories defined

[X] Yes [ ] No  Acute (immediate) Health Hazard

[X] Yes [ ] No  Chronic (delayed) Health Hazard
K-BAC 1005

SAFETY DATA SHEET

for SARA Title III Sections 311/312 as indicated:

[ ] Yes [X] No Fire Hazard
[X] Yes [ ] No Sudden Release of Pressure Hazard
[ ] Yes [X] No Reactive Hazard

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<tr>
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<th>Canadian IDL</th>
<th>Canadian DSL</th>
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Other US EPA or State Lists

CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

International Regulatory Lists

CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

Canadian WHMIS Classification:

No data available.

Regulatory Information: Primary EPA Registration #: 88714-1
This product is subject to registration under FIFRA.
All ingredients are reported in the EPA TSCA Inventory.

Canadian regulations: This product is not registered for sale or use as a pesticide in Canada.

16. OTHER INFORMATION

Revision Date: 04/08/2015
Additional Information About This Product: No data available.

Company Policy or Disclaimer:
The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or use of this information or product. If the product is used as a component in another product, this information may not be applicable.