



K-BAC 1020

Printed: 03/18/2020
Revision: 03/04/2020
Supersedes Revision: 04/08/2015

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 210514
Product Name: K-BAC 1020
Category: Biocide
Company Name: Water Science Technologies, LLC
1701 Vanderbilt Road
Birmingham, AL 35234
Phone Number: (866)284-9244
Emergency Contact: ChemTel, Inc. (US) (800)255-3924
ChemTel, Inc. (Int'l) (813)248-0585
Information: Company EPA #: 88714
Intended Use: A microbiocidal bactericide, fungicide, algicide, and slimicide.

2. HAZARDS IDENTIFICATION

Acute Toxicity: Oral, Category 4
Acute Toxicity: Inhalation, Category 4
Serious Eye Damage/Eye Irritation, Category 1
Skin Sensitization, Category 1A
Aquatic Toxicity (Chronic), Category 3



GHS Signal Word: Danger

GHS Hazard Phrases: H302 - Harmful if swallowed.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H332 - Harmful if inhaled.
H412 - Harmful to aquatic life with long lasting effects.

GHS Precautionary Phrases: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash face, hands, and any exposed skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases: P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+352 - IF ON SKIN: Wash with plenty of soap and water.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P330 - Rinse mouth.
P333+313 - If skin irritation or rash occurs, seek medical advice/attention.
P362+364 - Take off contaminated clothing and wash it before reuse.

GHS Storage and Disposal Phrases: P501 - Dispose of contents/container to an approved waste disposal plant.



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Hazard Rating System:

| | |
|--------------|---|
| HEALTH | 4 |
| FLAMMABILITY | 1 |
| PHYSICAL | 0 |
| PPE | X |

HMIS:

3. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS # | Ingredient(s) | Concentration |
|------------|---------------------------------|---------------|
| 10222-01-2 | 2,2-Dibromo-3-nitropropionamide | 19.0 -21.0 % |
| NA | Other ingredients | ~80.0 % |

* Other ingredients refers to a glycol/water blend.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

- In Case of Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Seek medical advice/attention immediately.
- In Case of Skin Contact:** Wash exposed area with soap and water thoroughly. May cause allergic skin reaction. Remove contaminated clothing and wash before reuse. Seek medical advice/attention immediately.
- In Case of Eye Contact:** Immediately flush eyes with running water for at least 15 minutes. Remove contact lenses if present and easy to do so, after the first 5 minutes. Seek medical advice/attention immediately.
- In Case of Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Never give anything to an unconscious person. Seek medical advice/attention immediately.
- Signs and Symptoms Of Exposure:** Burning sensation, itching, rashes, hives, coughing and/or wheezing, difficulty in breathing.
- Note to Physician:** May cause sensitization in susceptible persons. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

- Flash Pt:** > 93.3 C (> 200.00 F) Method Used: ASTM D Closed Cup
- Explosive Limits:** LEL: No data. UEL: No data.
- Autoignition Pt:** NA
- Suitable Extinguishing Media:** Use extinguishing media appropriate to surrounding fire conditions.
- 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. Use water spray to cool unopened containers.
- Flammable Properties and Hazards:** No data available.



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6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Avoid access to streams, lakes or ponds.

Steps To Be Taken In Case Material Is Released Or Spilled: Decontaminate spill area with 10% sodium bicarbonate solution. 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 contact with eyes, skin, or clothing. Wash thoroughly after handling. Avoid breathing product vapors or mists. Use with adequate ventilation. Keep containers closed when not in use.

Precautions To Be Taken in Storing: Store in a dry, cool, and well ventilated area away from heat sources and incompatible materials. Keep containers securely sealed. Protect containers from physical damage and check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| CAS # | Components (Chemical Name) | OSHA TWA | ACGIH TWA | Other Limits |
|------------|---------------------------------|----------|-----------|--------------|
| 10222-01-2 | 2,2-Dibromo-3-nitropropionamide | No data. | No data. | No data. |
| NA | Other ingredients | No data. | No data. | No data. |

Respiratory Equipment (Specify Type): 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 gloves to prevent skin exposure.
Recommended:
Neoprene gloves (0.75 mm)
Butyl rubber gloves (0.7 mm)
Nitrile rubber (0.38 mm)

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.



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9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|--|--|--------------------------------|
| Physical States: | <input type="checkbox"/> Gas | <input checked="" type="checkbox"/> Liquid | <input type="checkbox"/> Solid |
| Appearance and Odor: | Clear, yellow to amber liquid. chlorine-like. | | |
| Freeze Point/Pour Point: | < -34.4 C (< -30.00 F) | | |
| Boiling Point: | > 70.00 C (158.0 F) | | |
| Decomposition Temperature: | > 70.00 C (158.0 F) | | |
| Autoignition Pt: | NA | | |
| Flash Pt: | > 93.3 C (> 200.00 F) Method Used: ASTM D Closed Cup | | |
| Explosive Limits: | LEL: No data. UEL: No data. | | |
| Specific Gravity (Water = 1): | 1.25+/-0.05 | | |
| Vapor Pressure (vs. Air or mm Hg): | 4x10 ⁽⁻⁵⁾ MM_HG at 25.0 C (77.0 F) | | |
| Vapor Density (vs. Air = 1): | < 1 | | |
| Evaporation Rate: | < 1 | | |
| Solubility in Water: | soluble | | |
| pH: | 2.0 - 5.0 | | |
| Percent Volatile: | No data. | | |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| Reactivity: | No reactive hazards known/expected. |
| Stability: | Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/> |
| Conditions To Avoid - Instability: | Light, Heat, heating to decomposition. Incompatible materials. |
| Incompatibility - Materials To Avoid: | Strong acids, Strong bases, Strong oxidizing agents, Reducing agents. |
| Hazardous Decomposition or Byproducts: | Nitrogen oxides, hydrogen bromide. bromine fumes. Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/> |
| Possibility of Hazardous Reactions: | Product will not undergo polymerization. |
| Conditions To Avoid - Hazardous Reactions: | |



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11. TOXICOLOGICAL INFORMATION

Toxicological Information: Likely routes of exposure:
 Inhalation - Harmful by inhalation.
 Eye contact - Causes serious eye damage. May cause burns.
 Skin contact - May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
 Ingestion - Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute Toxicity:
 Oral (LD50) = 1387 mg/kg
 Dermal (LD50) = >4000 mg/kg
 Inhalation (LD50) = 1.05 mg/L

Irritation or Corrosion: Skin corrosion/irritation - May cause irritation.
 Serious eye damage/irritation - Causes serious eye damage.

Symptoms related to Toxicological Characteristics: Redness. Burning. May cause blindness. Itching. Rashes. Hives. Coughing and/or wheezing.

Sensitization: May cause sensitization by skin contact.

Chronic Toxicological Effects: No effects on specific target organs have been identified.

Carcinogenicity/Other Information: Germ cell mutagenicity - Not mutagenic in several in vitro assays. (CAS# 10222-01-2)
 Carcinogenicity - Did not cause cancer in laboratory animals. (CAS# 10222-01-2)
 Teratogenicity - Not teratogenic. The NOAEL (for fetal toxicity in rabbits) = 10 mg/kg/day (CAS# 10222-01-2)
 Reproductive toxicity - The product did not demonstrate reproductive toxicity. In a 2-generation study in rats, the NOEL for reproduction parameters was >= 30 mg/kg/day. (CAS# 10222-01-2)
 CAS# 10222-01-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

| CAS # | Ingredient(s) | NTP | IARC | ACGIH | OSHA |
|------------|-----------------------------------|------|------|-------|------|
| 10222-01-2 | 2,2-Dibromo-3-nitrilopropionamide | n.a. | n.a. | n.a. | n.a. |
| NA | Other ingredients | n.a. | n.a. | n.a. | n.a. |

12. ECOLOGICAL INFORMATION

General Ecological Information: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Ecotoxicity data:
 The data on DBNPA (CAS# 10222-01-2) as a individual component is:
 3.4 ppm for the Pimephales Promelas/96 hour/LC50
 0.86 ppm for the Daphnia Magna/48 hour/EC50
 0.72 ppm for the Mysidopsis Bahia/48 hour/LC50
 0.72 ppm for Scenedesmus Subspicatus/72 hour/EbC50
 0.06 ppm for Daphnia Magna/21 day/NOEC

The calculated values for the final product of K-BAC 1020 are:



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17.0 ppm (mg/L) for the Pimephales Promelas/96 hour/LC50
4.3 ppm (mg/L) for the Daphnia Magna/48 hour/EC50
3.6 ppm (mg/L) for the Mysidopsis Bahia/48 hour/LC50
3.6 ppm (mg/L) for Scenedesmus Subspicatus/72 hour/EbC50

Results of PBT and vPvB assessment: No data available.
Persistence and Degradability: Readily biodegradable.
Hydrolysis rate increases with an increase in either pH or temperature (half-lives at pH 7, 65 hours at 25C).
Bioaccumulative Potential: Not expected to bioaccumulate.
Mobility in Soil: Expected to be mobile in soil.

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 rinsate 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:
Hazard Class:

Packing Group:

IMDG MFAG Number:
Marine Pollutant: No

AIR TRANSPORT (ICAO/IATA):
ICAO/IATA Shipping Name: Not Regulated.



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15. REGULATORY INFORMATION

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

| CAS # | Ingredient(s) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|------------|-----------------------------------|--------------|-----------|--------------|
| 10222-01-2 | 2,2-Dibromo-3-nitrilopropionamide | No | No | No |
| NA | Other ingredients | No | No | No |

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

| | |
|---|--|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Explosive |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Flammable (gases, aerosols, liquid, or solid) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Oxidizer (liquid, solid or gas) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Self-reactive |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Pyrophoric (liquid or solid) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Pyrophoric gas |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Self-heating |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Organic peroxide |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Corrosive to metal |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Gas under pressure (compressed gas) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | In contact with water emits flammable gas |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Combustible Dust |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | (Physical) Hazard Not Otherwise Classified (HNOC) |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Acute toxicity (any route of exposure) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Skin Corrosion or Irritation |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Serious eye damage or eye irritation |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Respiratory or Skin Sensitization |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Germ cell mutagenicity |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Carcinogenicity |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Reproductive toxicity |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Specific target organ toxicity (single or repeated exposure) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Aspiration Hazard |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Simple Asphyxiant |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | (Health) Hazard Not Otherwise Classified (HNOC) |

| CAS # | Ingredient(s) | Canadian NPRI | Canadian IDL | Canadian DSL |
|------------|-----------------------------------|---------------|--------------|--------------|
| 10222-01-2 | 2,2-Dibromo-3-nitrilopropionamide | No | No | No |
| NA | Other ingredients | No | No | Yes |

| CAS # | Ingredient(s) | Other US EPA or State Lists |
|------------|-----------------------------------|---|
| 10222-01-2 | 2,2-Dibromo-3-nitrilopropionamide | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |
| NA | Other ingredients | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |

Regulatory Information: US Regulatory information:
 Primary EPA Registration # : 88714-2
 This product is subject to registration under FIFRA.
 All ingredients are reported in the EPA TSCA Inventory.

Canada Regulatory information:
 The active ingredient (CAS# 10222-01-2) in K-BAC 1020 is regulated under the Pest Control Products Act by the PMRA and is therefore exempt from registration as a substance under the DSL.



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This product complies to the Pest Control Products Act and is considered exempt from WHMIS classification.

Registration No.: 31032 Pest Control Products Act.

Canadian regulations: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

16. OTHER INFORMATION

Revision Date: 03/04/2020

Additional Information About No data available.

This Product:

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.