

MSDS**Material Safety Data Sheet**

From: Vinquiry, Inc.
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Windsor, CA 95492

VINQUIRY

24 hour Emergency Telephone:
Chemtrec: 1-800-424-9300

Outside U.S. and Canada Chemtrec: 202-483-7616

NOTE: CHEMTREC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All Non-emergency questions should be directed to Customer Service (1-707-838-6312) for assistance.

Chromatography Solvent

Contains: **1-Butanol, Formic Acid and Bromocresol Green**

Vinquiry Product Codes: 10-043-0000, 10-043-0118, 10-043-0237, 10-043-0473, 10-043-0946

BUTYL ALCOHOL, NORMAL

MSDS Number: CS043 --- *Effective Date: 01/01/01*

1. Product Identification

Synonyms: 1-Butanol; propyl carbinol; butanol; n-butyl alcohol

CAS No.: 71-36-3

Molecular Weight: 74.12

Chemical Formula: CH₃(CH₂)₂CH₂OH

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
n-Butyl Alcohol	71-36-3	99 - 100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY AFFECT LIVER AND KIDNEYS.

VINQUIRY INC. SAFETY DATA Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate

Flammability Rating: 3 - Severe (Flammable)

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER.

Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:

Butyl alcohols have produced few cases of poisoning in industry because of their low volatility. Causes irritation to upper respiratory tract. Difficult breathing, coughing, headache, dizziness, and drowsiness may occur. May be absorbed into the bloodstream with symptoms similar to ingestion.

Ingestion:

May have narcotic effect. May cause abdominal pain, nausea, headache, dizziness, and diarrhea. Large doses may affect kidneys and liver. May affect hearing. Estimated mean lethal dose is 3 - 7 ounces.

Skin Contact:

An irritant to the skin, causing a loss of natural oils. Can be absorbed through skin with symptoms paralleling those from ingestion.

Eye Contact:

Vapors can be irritating, causing tearing and pain. Splashes cause inflammation and blurred vision.

Chronic Exposure:

Prolonged skin contact may cause drying and cracking of skin. Hearing loss has been reported in workers chronically exposed to butyl alcohol. May affect sense of balance, liver and kidneys.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Flash point: 37C (99F) CC

Autoignition temperature: 343C (649F)

Flammable limits in air % by volume:

lel: 1.4; uel: 11.2

Flammable. Dangerous fire hazard when exposed to heat or flame.

Explosion:

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Fire Extinguishing Media:

Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require 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.

SOLUSORB(R) solvent adsorbent is recommended for spills of this product.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):

100 ppm

-ACGIH Threshold Limit Value (TLV):

50 ppm (TWA) Ceiling (skin)

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Clear, colorless solution.

Odor:

Strong characteristic, mildly alcoholic odor.

Solubility:

9 mL/100 mL water @ 25C

Specific Gravity:

0.81 @ 20C/4C

pH:

No information found.

% Volatiles by volume @ 21C (70F):

100

Boiling Point:

118C (244F)

Melting Point:

-89C (-128F)

Vapor Density (Air=1):

2.6

Vapor Pressure (mm Hg):

5 @ 20C (68F)

Evaporation Rate (BuAc=1):

0.46

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers, strong mineral acids, halogens, aluminum, chromium trioxide, alkali metals.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Oral rat LD50: 790 mg/kg; inhalation rat LC50: 8000 ppm/4H; skin rabbit LD50: 3400 mg/kg; irritation, standard Draize, skin, rabbit, 20 mg/24H moderate; irritation, standard Draize, eye, rabbit, 2 mg/24H severe; investigated as a mutagen, reproductive effector.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
n-Butyl Alcohol (71-36-3)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released to water, this material is expected to quickly evaporate. When released into water, this material is expected to readily biodegrade. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Environmental Toxicity:

The LC50/96-hour values for fish are over 100 mg/l. The EC50/48-hour values for daphnia are over 100 mg/l. This material is not expected to be toxic to aquatic life.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: BUTANOLS

Hazard Class: 3

UN/NA: UN1120

Packing Group: III

Information reported for product/size: 200L

International (Water, I.M.O.)

Proper Shipping Name: BUTANOLS

Hazard Class: 3.3

UN/NA: UN1120

Packing Group: III

Information reported for product/size: 200L

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----
Ingredient TSCA EC Japan Australia

n-Butyl Alcohol (71-36-3) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----
Ingredient Korea DSL NDSL Phil. --Canada--

n-Butyl Alcohol (71-36-3) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----
Ingredient -SARA 302- -SARA 313-----
RQ TPQ List Chemical Catg.

n-Butyl Alcohol (71-36-3) No No Yes No

-----\Federal, State & International Regulations - Part 2\-----
Ingredient CERCLA -RCRA- -TSCA-
261.33 8(d)

n-Butyl Alcohol (71-36-3) 5000 U031 No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Pure / Liquid)

Australian Hazchem Code: 3[Y]E

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 3 Reactivity: 0

Label Hazard Warning:

WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY AFFECT LIVER AND KIDNEYS.

Label Precautions:

Keep away from heat, sparks and flame.

Keep container closed.

Avoid breathing vapor or mist.

Use only with adequate ventilation.

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases call a physician.

Product Use:

Laboratory Reagent.

FORMIC ACID

MSDS Number: FA102 --- *Effective Date: 01/01/01*

1. Product Identification

Synonyms: Methanoic acid; hydrogen carboxylic acid; formylic acid

CAS No.: 64-18-6

Molecular Weight: 46.03

Chemical Formula: HCOOH

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Formic Acid	64-18-6	88 - 90%	Yes
Water	7732-18-5	10 - 12%	No

3. Hazards Identification

Emergency Overview

DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. INHALATION MAY CAUSE LUNG DAMAGE. VAPOR IS IRRITATING TO EYES AND RESPIRATORY TRACT. FLAMMABLE LIQUID AND VAPOR.

VINQUIRY INC. SAFETY DATA Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate

Flammability Rating: 2 - Moderate

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Red Stripe (Store Separately)

Potential Health Effects

Inhalation:

Inhalation of vapors can cause severe irritation of nose, throat, and upper respiratory tract. Inhalation of higher concentrations may cause central nervous system effects and lung damage.

Ingestion:

Causes serious burns and corrosion of the mouth, throat, and esophagus, with immediate pain and difficult swallowing. Other symptoms of abdominal pain, nausea, diarrhea and vomiting can occur, leading to shortness of breath and death. Severe poisonings may cause shock, kidney damage.

Skin Contact:

Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Contact:

Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:

Prolonged or repeated exposure to low concentrations may cause skin irritation and burns. Prolonged or repeated exposure may cause liver and kidney damage.

Aggravation of Pre-existing Conditions:

Sensitization is rare, but may occur in persons previously sensitized to formaldehyde.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Flash point: 50C (122F) CC

Autoignition temperature: 601C (1114F)

Flammable limits in air % by volume:

l_{el}: 18; u_{el}: 57

Fire data listed is for formic acid. Flash Point and explosive limits are for 90% aqueous solutions of formic acid.

Explosion:

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

Fire Extinguishing Media:

Dry chemical, carbon dioxide, water spray, or alcohol resistant foam.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require 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.

NEUTRASORB(R) or TEAM(R) 'Low Na+' acid neutralizers are recommended for spills of this product.

7. Handling and Storage

Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive or combustible materials, and out of direct sunlight. Strongly corrosive. Should be handled in 316 stainless steel, glass, ceramic, or similar corrosion resistant materials. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):

5 ppm (TWA)

-ACGIH Threshold Limit Value (TLV):

5 ppm (TWA), 10 ppm (STEL)

-NIOSH IDLH Level: 30 ppm

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details. Use explosion-proof equipment.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, wear a supplied air, full- facepiece respirator, airlined hood, or full- facepiece self-contained breathing apparatus. Formic acid has questionable warning properties and a low IDLH. Respirator recommended to 6 times the TLV value as a maximum.

Skin Protection:

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Clear, colorless liquid.

Odor:

Characteristic, pungent odor.

Solubility:

Infinitely soluble.

Density:

1.2

pH:

No information found.

% Volatiles by volume @ 21C (70F):

100

Boiling Point:

101C (214F)

Melting Point:

ca. 8C (ca. 46F)

Vapor Density (Air=1):

1.6 @ 19C (66F)

Vapor Pressure (mm Hg):

40 @ 24C (75F)

Evaporation Rate (BuAc=1):

2.1

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition. Dehydrated by sulfuric acid to produce carbon monoxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Sulfuric acid, strong caustics, furfuryl alcohol, hydrogen peroxide, strong oxidizers and bases. Reacts explosively with oxidizing agents.

Conditions to Avoid:

Heat, flame, other sources of ignition.

11. Toxicological Information

Oral rat LD50: 1100 mg/kg; inhalation rat LC50: 15 gm/m³/15M; investigated as a tumorigen, mutagen.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Formic Acid (64-18-6)	No	No	None
Water (7732-18-5)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

Environmental Toxicity:

This material is not expected to be toxic to aquatic life.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: FORMIC ACID
Hazard Class: 8
UN/NA: UN1779
Packing Group: II
Information reported for product/size: 127LB

International (Water, I.M.O.)

Proper Shipping Name: FORMIC ACID
Hazard Class: 8
UN/NA: UN1779
Packing Group: II
Information reported for product/size: 127LB

International (Air, I.C.A.O.)

Proper Shipping Name: FORMIC ACID
Hazard Class: 8
UN/NA: UN1779
Packing Group: II
Information reported for product/size: 127LB

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----
Ingredient TSCA EC Japan Australia

Formic Acid (64-18-6) Yes Yes Yes Yes
Water (7732-18-5) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----
Ingredient Korea DSL NDSL Phil.

Formic Acid (64-18-6) Yes Yes No Yes
Water (7732-18-5) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----
-SARA 302- -SARA 313-----
Ingredient RQ TPQ List Chemical Catg.

Formic Acid (64-18-6) No No Yes No
Water (7732-18-5) No No No No

-----\Federal, State & International Regulations - Part 2\-----
-RCRA- -TSCA-
Ingredient CERCLA 261.33 8(d)

Formic Acid (64-18-6)	5000	U123	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Mixture / Liquid)

Australian Hazchem Code: 2R

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **3** Flammability: **2** Reactivity: **0**

Label Hazard Warning:

DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. INHALATION MAY CAUSE LUNG DAMAGE. VAPOR IS IRRITATING TO EYES AND RESPIRATORY TRACT. FLAMMABLE LIQUID AND VAPOR.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Do not breathe vapor or mist.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

Keep away from heat, sparks and flame.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

BROMOCRESOL GREEN SODIUM SALT

MSDS Number: BG024 --- *Effective Date: 01/01/01*

1. Product Identification

Synonyms: 3,3',5,5'-Tetrabromo-m-cresolsulfonphthalein, Sodium salt

CAS No.: 62625-32-5

Molecular Weight: 720

Chemical Formula: C₂₁H₁₃O₅Br₄S Na

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Bromocresol Green Sodium Salt	62625-32-5	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

VINQUIRY INC. SAFETY DATA Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 1 - Slight

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:

May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

Ingestion:

Large oral doses may cause irritation to the gastrointestinal tract.

Skin Contact:

May cause irritation with redness and pain.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and

shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire:

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Explosion:

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Dark green granules.

Odor:

Characteristic odor.

Solubility:

Slightly soluble in water.

Specific Gravity:

No information found.

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

Not applicable.

Melting Point:

230C (446F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Burning may produce bromines, sulfur oxides, carbon dioxide, and carbon monoxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers.

Conditions to Avoid:

No information found.

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Bromocresol Green Sodium Salt (62625-32-5)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
Bromocresol Green Sodium Salt (62625-32-5)	Yes	Yes	No	No

-----\Chemical Inventory Status - Part 2\-----				
Ingredient	Korea	--Canada--		
		DSL	NDSL	Phil.
Bromocresol Green Sodium Salt (62625-32-5)	No	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Bromocresol Green Sodium Salt (62625-32-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----				
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Ingredient	CERCLA	-RCRA-	-TSCA-
-----	-----	261.33	8(d)
Bromocresol Green Sodium Salt (62625-32-5)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Pure / Solid)

Australian Hazchem Code: No information found.

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **1** Flammability: **1** Reactivity: **0**

Label Hazard Warning:

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Label First Aid:

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Product Use:

Laboratory Reagent.

Disclaimer

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