

Issue Date 07/24/2022

Version 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**

Product Name Command

**Other means of identification**

Product Code 1147

**Details of the supplier of the safety data sheet**

Company Name Blue Cardinal Chemical, LLC  
3670 Scarlet Oak Blvd.  
St. Louis, MO 63122  
800-325-3312

**Emergency telephone number**

Emergency Telephone CHEMTEL 1-800-255-3924

### 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                   |                           |
|-----------------------------------|---------------------------|
| Acute toxicity - Oral             | Category 5                |
| Skin corrosion/irritation         | Category 1 Sub-category A |
| Serious eye damage/eye irritation | Category 1                |

**Label elements**

#### Emergency Overview

## DANGER

**Hazard statements**

May be harmful if swallowed  
Causes severe skin burns and eye damage



Appearance: Clear

Physical state: Liquid

Odor: Mild



**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Specific Treatment (See Section 4 on the SDS) 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 or doctor/physician. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC)****Other Information**

• Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| CHEMICAL NAME          | CAS NO.   | WEIGHT - % | TRADE SECRET |
|------------------------|-----------|------------|--------------|
| Potassium Hydroxide    | 1310-58-3 | 5-10       | *            |
| 2-butoxyethanol        | 111-76-2  | 1-5        | *            |
| Sodium Laureth Sulfate | 9004-82-4 | 1-5        | *            |
| 2-Propanol             | 67-63-0   | 1-5        | *            |
| Sodium Metasilicate    | 6834-92-0 | 1-5        | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****First aid measures****General Advice**

Immediate medical attention is required.

**Skin Contact**

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. For minor skin contact, avoid spreading material on unaffected skin. For severe burns, immediate medical attention is required.

**Eye Contact**

Do not rub affected area. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.

**Ingestion**

Drink plenty of water. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Self-protection of the first aider**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

**Most important symptoms and effect, both acute and delayed****Symptoms**

Any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed****Note to physicians**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

**Explosion data****Sensitivity to Mechanical Impact**

None.

**Sensitivity to Static Discharge**

None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

**Environmental precautions****Environmental precautions**

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**Methods and material for containment and cleaning up****Methods for containment & cleaning up**

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. Take up mechanically, placing in appropriate containers for disposal. After cleaning, flush away traces with water.

**7. HANDLING AND STORAGE****Precautions for safe handling****Advice on safe handling**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible materials

None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

| CHEMICAL NAME                    | ACGIH TLV                     | OSHA PEL  | NIOSH IDLH  |
|----------------------------------|-------------------------------|---|---|
| Potassium Hydroxide<br>1310-58-3 | Ceiling: 2 mg/m <sup>3</sup>  | (vacated) Ceiling: 2 mg/m <sup>3</sup>  | Ceiling: 2 mg/m <sup>3</sup>  |
| 2-butoxyethanol<br>111-76-2      | TWA: 20 ppm                   | TWA: 50 ppm<br>TWA: 240 mg/m <sup>3</sup><br>(vacated) TWA: 25 ppm<br>(vacated) TWA: 120 mg/m <sup>3</sup><br>(vacated) S*<br>S*  | IDLH: 700 ppm<br>TWA: 5 ppm<br>TWA: 24 mg/m <sup>3</sup>  |
| 2-Propanol<br>67-63-0            | STEL: 400 ppm<br>TWA: 200 ppm | TWA: 400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>(vacated) TWA: 400 ppm<br>(vacated) TWA: 980 mg/m <sup>3</sup><br>(vacated) STEL: 500 ppm<br>(vacated) STEL: 1225 mg/m <sup>3</sup> | IDLH: 2000 ppm<br>TWA: 400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1225 mg/m <sup>3</sup> |
| Ethanol<br>64-17-5               | STEL: 1000 ppm                | TWA: 1000 ppm<br>TWA: 1900 mg/m <sup>3</sup><br>(vacated) TWA: 1000 ppm<br>(vacated) TWA: 1900 mg/m <sup>3</sup>  | IDLH: 3300 ppm<br>TWA: 1000 ppm<br>TWA: 1900 mg/m <sup>3</sup>  |

NIOSH IDLH Immediately Dangerous to Life or Health

### **Other Information**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

### Appropriate engineering controls

#### **Engineering Controls**

Showers, Eyewash stations & Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### **Eye/face protection**

Tight sealing safety goggles. Face protection shield.

#### **Skin and body protection**

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

#### **Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

#### **General Hygiene**

Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

|                |                          |
|----------------|--------------------------|
| Physical State | Liquid                   |
| Appearance     | Clear                    |
| Color          | Colorless                |
| Odor           | Mild                     |
| Odor Threshold | No Information available |

| <b><u>Property</u></b>        | <b><u>Values</u></b>     |
|-------------------------------|--------------------------|
| pH                            | 13.0 - 14.0              |
| Specific Gravity              | 1.04                     |
| Viscosity                     | No Information available |
| Melting point/freezing point  | No Information available |
| Flash point                   | No Information available |
| Boiling point / boiling range | No Information available |
| Evaporation rate              | No Information available |
| Flammability (solid, gas)     | No data available        |
| Flammability Limits in Air    |                          |
| Upper flammability limit      | No Information available |
| Lower flammability limit      | No Information available |
| Vapor pressure                | No Information available |
| Vapor density                 | No Information available |
| Water solubility              | No Information available |
| Partition coefficient         | No Information available |
| Autoignition temperature      | No Information available |
| Decomposition temperature     | No Information available |

**Other Information**

|                 |     |
|-----------------|-----|
| Density Lbs/Gal | 8.7 |
| Voc Content (%) | 4.4 |

**10. STABILITY AND REACTIVITY****Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Exposure to air or moisture over prolonged periods.

**Incompatible materials**

Incompatible with strong acids and bases. Incompatible with oxidizing agents. Strong acids. Aluminum.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

|                            |  |
|----------------------------|--|
| <b>Product Information</b> | The primary effects and toxicity of this material are due to its corrosive nature. |
| <b>Skin Contact</b>        | The product causes burns of eyes, skin and mucous membranes.                       |
| <b>Eye Contact</b>         | Corrosive to the eyes and may cause severe damage including blindness.             |
| <b>Inhalation</b>          | Causes burns.  |
| <b>Ingestion</b>           | Causes burns. May be harmful if swallowed.   |

| CHEMICAL NAME                       | ORAL LD50            | DERMAL LD50             | INHALATION LC50                                |
|-------------------------------------|----------------------|-------------------------|--|
| Potassium Hydroxide<br>1310-58-3    | = 284 mg/kg ( Rat )  | -                       | -  |
| 2-butoxyethanol<br>111-76-2         | = 470 mg/kg ( Rat )  | = 435 mg/kg ( Rabbit )  | = 450 ppm ( Rat ) 4 h<br>= 486 ppm ( Rat ) 4 h |
| Sodium Laureth Sulfate<br>9004-82-4 | = 1600 mg/kg ( Rat ) | -                       | -  |
| 2-Propanol<br>67-63-0               | = 1870 mg/kg ( Rat ) | = 4059 mg/kg ( Rabbit ) | = 72600 mg/m3 ( Rat ) 4 h                      |
| Sodium Metasilicate<br>6834-92-0    | = 1153 mg/kg ( Rat ) | -                       | -  |

### Information on toxicological effects

**Symptoms** No Information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                               |   |
|-------------------------------|---|
| <b>Corrosivity</b>            | Causes burns. Extremely corrosive and destructive to tissue. Risk of serious damage to eyes.  |
| <b>Sensitization</b>          | No Information available.   |
| <b>Germ cell mutagenicity</b> | No Information available.   |
| <b>Carcinogenicity</b>        | The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. |

| CHEMICAL NAME               | ACGIH | IARC    | NTP | OSHA |
|-----------------------------|-------|---------|-----|------|
| 2-butoxyethanol<br>111-76-2 | A3    | Group 3 | -   | -    |
| 2-Propanol<br>67-63-0       | -     | Group 3 | -   | X    |

**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 3 - Not classifiable as a human carcinogen

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Reproductive toxicity</b>    | No Information available. |
| <b>STOT - single exposure</b>   | No Information available. |
| <b>STOT - repeated exposure</b> | No Information available. |

**Chronic toxicity**

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

**Target organ effects**

Blood, Central nervous system, EYES, hematopoietic system, Kidney, Liver, Respiratory system, Skin.

**Aspiration hazard**

No Information available.

**Numerical measures of toxicity - Product Information****Unknown Acute Toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

|                               |              |
|-------------------------------|--------------|
| ATEmix (oral)                 | 3,458 mg/kg  |
| ATEmix (dermal)               | 18,178 mg/kg |
| ATEmix (inhalation-dust/mist) | 67 mg/l      |
| ATEmix (inhalation-vapor)     | 20,454 mg/l  |

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| CHEMICAL NAME                    | ALGAE/AQUATIC PLANTS   | FISH  | CRUSTACEA   |
|----------------------------------|--|---|---|
| 2-butoxyethanol<br>111-76-2      |  | 1490: 96 h <i>Lepomis macrochirus</i><br>mg/L LC50 static<br>2950: 96 h <i>Lepomis macrochirus</i><br>mg/L LC50   | 1000: 48 h <i>Daphnia magna</i> mg/L<br>EC50  |
| 2-Propanol<br>67-63-0            | 1000: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50<br>1000: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50 | 11130: 96 h <i>Pimephales promelas</i><br>mg/L LC50 static<br>9640: 96 h <i>Pimephales promelas</i><br>mg/L LC50 flow-through<br>1400000: 96 h <i>Lepomis macrochirus</i><br>µg/L LC50  | 13299: 48 h <i>Daphnia magna</i><br>mg/L EC50   |
| Sodium Metasilicate<br>6834-92-0 |  | 210: 96 h <i>Brachydanio rerio</i> mg/L<br>LC50 semi-static<br>210: 96 h <i>Brachydanio rerio</i> mg/L<br>LC50  | 216: 96 h <i>Daphnia magna</i> mg/L<br>EC50   |
| Ethanol<br>64-17-5               |  | 12.0 - 16.0: 96 h <i>Oncorhynchus mykiss</i> mL/L LC50 static<br>13400 - 15100: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through<br>100: 96 h <i>Pimephales promelas</i><br>mg/L LC50 static  | 9268 - 14221: 48 h <i>Daphnia magna</i> mg/L LC50<br>2: 48 h <i>Daphnia magna</i> mg/L<br>EC50 Static |
| Sodium Sulfate<br>7757-82-6      |  | 3040 - 4380: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static<br>13500: 96 h <i>Lepomis macrochirus</i><br>mg/L LC50<br>13500 - 14500: 96 h <i>Pimephales promelas</i> mg/L LC50<br>6800: 96 h <i>Pimephales promelas</i><br>mg/L LC50 static | 2564: 48 h <i>Daphnia magna</i> mg/L<br>EC50<br>630: 96 h <i>Daphnia magna</i> mg/L<br>EC50           |

**Persistence and Degradability**

No Information available.

**Bioaccumulation**

No Information available.

| CHEMICAL NAME                    | PARTITION COEFFICIENT |
|----------------------------------|-----------------------|
| Potassium Hydroxide<br>1310-58-3 | 0.83                  |
| 2-butoxyethanol<br>111-76-2      | 0.81                  |
| 2-Propanol<br>67-63-0            | 0.05                  |

**Other Adverse Effects**

No Information available.

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Do not reuse container.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| CHEMICAL NAME                    | CALIFORNIA HAZARDOUS WASTE STATUS |
|----------------------------------|-----------------------------------|
| Potassium Hydroxide<br>1310-58-3 | Toxic<br>Corrosive                |
| 2-Propanol<br>67-63-0            | Toxic<br>Ignitable                |

**14. TRANSPORT INFORMATION**

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

**DOT**

UN/ID No. UN1814  
Proper Shipping Name Potassium Hydroxide Solution  
Hazard Class 8  
Packing Group III

**15. REGULATORY INFORMATION****International Inventories**

TSCA Complies  
DSL/NDSL Complies

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List



**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| CHEMICAL NAME              | SARA 313-THRESHOLD VALUES % |
|----------------------------|-----------------------------|
| 2-butoxyethanol - 111-76-2 | 1.0                         |
| 2-Propanol - 67-63-0       | 1.0                         |

**SARA 311/312 Hazard Categories**

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire Hazard                       | No  |
| Sudden Release Of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

**CWA (Clean Water Act)**

This product contains substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| CHEMICAL NAME                    | CWA-REPORTABLE QUANTITIES | CWA-TOXIC POLLUTANTS | CWA-PRIORITY POLLUTANTS | CWA-HAZARDOUS SUBSTANCES |
|----------------------------------|---------------------------|----------------------|-------------------------|--------------------------|
| Potassium Hydroxide<br>1310-58-3 | 1000 lb                   | -                    | -                       | X                        |

**CERCLA**

This material contains substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

| CHEMICAL NAME                    | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ)                  |
|----------------------------------|--------------------------|----------------|---|
| Potassium Hydroxide<br>1310-58-3 | 1000 lb                  | -              | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |

**U.S. State Regulations****California Proposition 65**

This product has been evaluated and does not require warning labeling under California Proposition 65.

**U.S. State Right-to-Know Regulations**

| Chemical Name                    | New Jersey | Massachusetts | Pennsylvania |
|----------------------------------|------------|---------------|--------------|
| Potassium Hydroxide<br>1310-58-3 | X          | X             | X            |
| 2-butoxyethanol<br>111-76-2      | X          | X             | X            |
| 2-Propanol<br>67-63-0            | X          | X             | X            |
| Ethanol<br>64-17-5               | X          | X             | X            |
| Sodium Sulfate<br>7757-82-6      | -          | X             | X            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not Applicable

**16. OTHER INFORMATION**

|             |                |   |              |   |            |   |                     |   |
|-------------|----------------|---|--------------|---|------------|---|---------------------|---|
| <b>NFPA</b> | Health hazards | 3 | Flammability | 0 | Reactivity | 0 | Other               | - |
| <b>HMIS</b> | Health hazards | 3 | Flammability | 0 | Reactivity | 0 | Personal protection | X |

Issue Date 07/24/2022

Revision Date

Revision Note

N/A = Not Applicable; N/D = Not Determined

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**