

Revision Date 12/27/2022

Version 1.1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name K-2 DISINFECTANT

Other means of identification

Product Code 1122

Recommended use of the chemical and restrictions on use

Recommended use Disinfectant
Uses Advised Against For industrial and institutional use only.

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

GHS-US classification

Acute toxicity (Inhalation: dust,mist)	Category 4
Skin corrosion/irritation	Category 2
Eye Damage	Category 1
Skin Sensitizer	Category 1
Carcinogenicity	Category 2
Specific Target Organ Toxicity (single exposure)	Category 2

Label elements

Emergency Overview

DANGER

Hazard statements

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs.



Appearance: Clear Yellow Liquid

Physical state: Liquid

Odor: Lemon-Like



Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist, spray. Avoid breathing mist, spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear eye protection, protective clothing, protective gloves.

Precautionary Statements - Response

If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Call a poison center or doctor. If exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER, a doctor. Call a doctor, a POISON CENTER if you feel unwell. Specific treatment (see First aid measures on this label). If skin irritation occurs: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to comply with local/regional/national/international regulations.

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

• N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NO.	WEIGHT - %	GHS-US classification	TRADE SECRET
C12-15 Alcohols Ethoxylated (Surfactant)	68131-39-5	1-5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318	*
Sodium Carbonate (Cleansing Agent)	497-19-8	1-5	Eye Irrit. 2, H319	*
Alkyl C12-18 Dimethylbenzyl Ammonium Chloride (Antimicrobial)	68391-01-5	1-5	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 STOT SE 2, H371 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	*
Alkyl C12-14 Dimethylethylbenzyl Ammonium Chloride (Antimicrobial)	85409-23-0	1-5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Aquatic Chronic 1, H410	*
Ethanol (Solvent)	64-17-5	0.1-1	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 Carc. 1A, H350 STOT SE 3, H336	*
d-Limonene (Fragrance)	5989-27-5	0.1-1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304	*

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

Full text of H-phrases: see section 16

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

If you feel unwell, seek medical advice (show the label where possible).

Skin Contact	Take off contaminated clothing and wash it before reuse. Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention.
Eye Contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
Ingestion	Rinse mouth. Do NOT induce vomiting. Consult a doctor/medical service if you feel unwell.

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

SYMPTOMS/EFFECTS: Causes skin irritation. May cause an allergic skin reaction. May cause cancer. May cause damage to organs. Causes serious eye damage. Harmful if inhaled.

SYMPTOMS/EFFECTS AFTER INHALATION: Harmful if inhaled.

SYMPTOMS/EFFECTS AFTER SKIN CONTACT: May cause an allergic skin reaction. Causes skin irritation.

SYMPTOMS/EFFECTS AFTER EYE CONTACT: Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.

SYMPTOMS/EFFECTS AFTER INGESTION: Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Nausea. Diarrhea. Cramps.

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

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

All extinguishing media allowed.

Specific hazards arising from the chemical

Reactivity: Upon combustion: CO and CO₂ are formed.

Protective equipment and precautions for firefighters

Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

General measures

Isolate from fire, if possible, without unnecessary risk.

Personal precautions, protective equipment and emergency procedures**Personal precautions**

Safety glasses. Gloves. Protective clothing.

Emergency procedures

Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

For emergency responders**Personal precautions**

Equip cleanup crew with proper protection.

Emergency procedures

Stop leak if safe to do so. Stop release. Ventilate area.

Environmental precautions**Environmental precautions**

Avoid release to the environment. Prevent soil and water pollution.

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

Contain released product, collect/pump into suitable containers.

Methods for cleaning up

This material and its container must be disposed of in a safe way, and as per local legislation.

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

Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse.

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

Comply with applicable regulations. Keep container closed when not in use. Store in original container. Protect from freezing. Keep only in the original container. Store in a dry area. Store in a cool area. Meet the legal requirements.

Incompatible Materials

Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Alkyl C12-18 Dimethylbenzyl Ammonium Chloride (68391-01-5)		
Not applicable		

Ethanol (64-17-5)		
ACGIH	ACGIH Ceiling (mg/m³)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL TWA [1]	1900 mg/m ³
OSHA	OSHA PEL TWA [2]	1000 ppm

Alkyl C12-14 Dimethylethylbenzyl Ammonium Chloride (85409-23-0)		
Not applicable		

Sodium Carbonate (497-19-8)		
Not applicable		

C12-15 Alcohols Ethoxylated (68131-39-5)		
Not applicable		

d-Limonene (5989-27-5)		
Not applicable		

Appropriate engineering controls**Engineering Controls**

Use appropriate personal protective equipment when risk assessment indicates this is necessary.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Safety glasses.

Skin and body protection

Gloves. Protective clothing.

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

Physical State	Liquid
Appearance	Clear, Yellow liquid
Color	Yellow
Odor	Lemon-like
Odor Threshold	No data available

Property**Values**

pH	11 – 14
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	> 200 °F Closed Cup
Relative evaporation rate (butylacetate=1)	No data available
Flammability	No data available
Explosive limits	No data available
Explosive properties	No data available
Oxidising properties	No data available
Vapour pressure	No data available
Relative density	No data available
Relative vapour density at 20°C	No data available
Density	1.04 g/ml
Solubility	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
VOC content	< 1 %

10. STABILITY AND REACTIVITY**Reactivity**

Upon combustion: CO and CO₂ are formed.

Chemical Stability

Stable under normal conditions.

Possibility Of Hazardous Reactions

Refer to section 10 on Reactivity.

Conditions To Avoid

No additional information available.

Incompatible Materials

Strong acids.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified

Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 15800 mg/kg bodyweight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	124.7 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE CLP (oral)	10740 mg/kg bodyweight
Sodium Carbonate (497-19-8)	
LD50 oral rat	2800 mg/kg (Rat, Male / female, Experimental value of similar product, Hydrate form, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg (16 CFR 1500.40, 24 h, Rabbit, Experimental value of similar product, Hydrate form, Dermal, 14 day(s))
LC50 Inhalation - Rat	(2 h, Rat, Male, Experimental value)
ATE CLP (oral)	2800 mg/kg bodyweight
C12-15 Alcohols Ethoxylated (68131-39-5)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
d-Limonene (5989-27-5)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Read-across, Dermal, 7 day(s))

Skin corrosion/irritation

Causes skin irritation.

pH: 11 – 14

Serious eye damage/irritation

Causes serious eye damage.

pH: 11 – 14

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Not classified

Carcinogenicity

Suspected of causing cancer.

Ethanol (64-17-5)	
IARC group	1 - Carcinogenic to Humans

d-Limonene (5989-27-5)	
IARC group	3 - Not classifiable

Reproductive toxicity

Not classified

Specific target organ toxicity (single exposure)

May cause damage to organs.

Specific target organ toxicity (repeated exposure)

Not classified

Aspiration hazard

Not classified

Symptoms/injuries after inhalation

Harmful if inhaled.

Symptoms/injuries after skin contact

May cause an allergic skin reaction. Causes skin irritation.

Symptoms/injuries after eye contact

Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.

Symptoms/injuries after ingestion

Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Nausea. Diarrhea. Cramps.

Likely routes of exposure

Skin and eyes contact; Inhalation

12. ECOLOGICAL INFORMATION**Toxicity**

Ethanol (64-17-5)	
LC50 - Fish [1]	15300 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
Sodium Carbonate (497-19-8)	
LC50 - Fish [1]	300 mg/l (96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	200 – 227 mg/l (48 h, Ceriodaphnia sp., Semi-static system, Fresh water, Experimental value, Locomotor effect)
C12-15 Alcohols Ethoxylated (68131-39-5)	
LC50 - Fish [1]	5 – 10 mg/l Fish
EC50 - Crustacea [1]	5 – 10 mg/l Daphnia
ErC50 algae	10 – 100 mg/l Algae
d-Limonene (5989-27-5)	
LC50 - Fish [1]	720 µg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	0.307 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)

Persistence and degradability

Ethanol (64-17-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 – 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance

Sodium Carbonate (497-19-8)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
d-Limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

Bioaccumulative potential

Ethanol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.35 (Experimental value, Equivalent or similar to OECD 107, 24 °C)
Bioaccumulative potential	Not bioaccumulative.
Sodium Carbonate (497-19-8)	
Bioaccumulative potential	Not bioaccumulative.
d-Limonene (5989-27-5)	
BCF - Fish [1]	864.8 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation ($4 \leq \text{Log Kow} \leq 5$).

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes Dispose in a safe manner in accordance with local/national regulations.

14. TRANSPORT INFORMATION**Department of Transportation (DOT)**

In accordance with DOT : Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

15. REGULATORY INFORMATION**International Inventories**

TSCA All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Legend:

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

US Federal Regulations

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

US State Regulations**California Proposition 65****WARNING**

This product can expose you to beta-Myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

U.S. EPA Label Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label
Danger: Corrosive. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, rubber gloves, and protective clothing. Harmful if swallowed. Remove contaminated clothing and wash before reuse. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

EPA Pesticide Registration Number 1839-95-91641

16. OTHER INFORMATION

Training advice: Normal use of this product shall imply use in accordance with the instructions on the packaging.



NFPA	Health hazards	2	Flammability	0	Reactivity	0
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Issue Date

Revision Date

12/27/2022

Revision Note

Prepared by: Technical Department

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