



**SAFETY  
DATA SHEET**

**SECTION 1- CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product Name:** Citrus Cleaner

**Product Use:** Citrus Degreaser and Cleaner

**Use Restrictions:** For Industrial and Professional Use Only

**Manufacturer:** GoKlean Products LLC.  
1220 Biscayne Blvd.  
DeLand, FL 32724  
Phone: 386-943-4171

**Emergency:** 386-873-5075

**SECTION 2- HAZARDS IDENTIFICATION**

**1) GHS Classification of the substance or mixture:**

- Skin corrosion/irritation- Category 1A
- Serious eye damage/eye irritation- Category 2A
- Acute toxicity, Oral- Category 4

**2) Label Elements:**



**Signal Word:** Danger

**Hazard Statements:**

- H227- Combustible liquid
- H302- Harmful if swallowed
- H314- Causes severe skin burns and eye damage
- H319- Causes serious eye irritation
- H335- May cause respiratory irritation

**Precautionary Statements:**

- P102- Keep out of reach of children
- P234- Keep only in original container
- P260- Do not breathe fume/mist/vapors/spray
- P262- Do not get in eyes, on skin, or on clothing
- P264- Wash skin thoroughly after handling
- P280- Wear solvent resistant protective gloves and splash proof eyewear

**Response Statements:**

P303+P353+P361+P363- IF ON SKIN (or hair): Rinse skin with water/shower. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, and easy to do so. Continue Rinsing.

P304+P340+ IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P301+P330+P331- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage and Disposal Statements:**

P403- Store in a well-ventilated place.

P405- Store locked up.

P501- Dispose of contents/container in accordance with local/regional/national regulation.

**Other Hazards:**

OSHA HCS 2012- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

**HMIS Classification:**

Health Hazard- 1

Chronic Health Hazard- 0

Flammability- 0

Physical Hazards- 2

**SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Chemical/Common Name</u>	<u>CAS #</u>	<u>PERCENTAGE</u>	<u>HAZARDOUS</u>
2-Butoxy Ethanol	111-76-2	1-5%	Yes
Potassium Hydroxide	1310-58-3	1-5%	Yes
D-Limonene	5989-27-5	1-5%	Yes

**SECTION 4- FIRST AID MEASURES**

**Inhalation:** If affected, remove individual to fresh air. If breathing is difficult administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm and quiet and obtain medical attention.

**Skin:** Immediately flush affected area with lots of water for at least 2 minutes. Remove contaminated clothing and wash before reuse.

**Eyes:** Flush immediately with large quantities of running water for at least 5 minutes. Obtain medical attention.

**Ingestion:** Immediately give a lot of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

**SECTION 5-FIRE FIGHTING MEASURES**

**Flash Point:** None to boiling

**Lower Explosive Limit:** N/A     **Upper Explosive Limit:** N/A

**General Hazards-**

**Fire:** Product is not flammable.

**Suitable Extinguishing Media:** As required to fight surrounding fire.

**Fire Fighting Procedures:** Wear self contained breathing apparatus for fire fighting if necessary.

**Special Hazards:** Product contains combustible organic ingredients. Fire may produce dense black smoke containing hazardous products of combustion.

**SECTION 6- ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Emergency Procedures:** As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering.

**Environmental precautions:** Avoid run off to waterways and sewers.

**Methods and material for containment and cleaning up:** Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to appropriate waste disposal container.

## SECTION 7- HANDLING AND STORAGE

**Precautions for safe handling:**

Avoid contact with skin and eyes by wearing protective clothing and equipment. Avoid inhalation of vapor or mist. Use only with adequate ventilation.

**Conditions for safe storage:**

Keep container tightly closed in a dry and well-ventilated place. Store away from acids, acidic materials and oxidizers.

## SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:**

Component	CAS #	ACGIH Exposure Limits	OSHA Exposure Limits
2-Butoxy Ethanol	111-76-2	25 ppm	50 ppm
Potassium Hydroxide	1310-58-3	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>

**Personal Protective Equipment-**

**Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

**Hand protection:** Wear protective gloves made from the following materials- nitrile rubber or polyethylene. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye Protection:** Wear safety glasses with side shields.

**Skin and Body Protection:** Where extensive dermal exposure may be expected, either a chemical suit or chemical apron will be needed.

**Hygienic Practices:** Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

## SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

<b>Products Description:</b>	Clear orange liquid with citrus odor
<b>Solubility in Water:</b>	Complete
<b>Boiling Point:</b>	212°F
<b>Specific Gravity (WATER=1):</b>	1.02
<b>Vapor Pressure (mmHg):</b>	N/D
<b>Vapor Density (AIR=1):</b>	N/D
<b>Percent Volatile by Volume (%):</b>	> 80.00
<b>Evaporation Rate (WATER=1):</b>	1
<b>Flash Point (C.O.C.):</b>	None
<b>pH (1% w/w in water):</b>	13

## SECTION 10- STABILITY AND REACTIVITY DATA

**Stability:** Stable under recommended storage conditions.

**Material to Avoid:** Avoid contact with acids and strong oxidizers such as permanganate, chlorine, etc.

**Hazardous Polymerization:** Will not occur

**Hazardous Decomposition Products:** Oxides of d-limonene, which can result from improper storage and handling, are known to cause skin sensitization. No decomposition if stored properly.

## SECTION 11- TOXICOLOGICAL INFORMATION

### 2-Butoxyethanol- (CAS 111-76-2)-

#### **Toxicity:**

**Acute oral toxicity-** LD50 Oral: 1,414 mg/kg

**Species:** guinea pig

**Remarks:** Ingestion may cause weakness, confusion, anxiety, decreased blood pressure, and CNS depression with collapse and coma.

**Acute inhalation toxicity-** LC50: ~ 932 ppm

**Exposure time:** 4 HOURS

**Species:** guinea pig

**Remarks:** Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause nausea. May cause headaches. Extensive and prolonged contact with skin may cause confusion, anxiety, decreased blood pressure, and CNS depression with collapse and coma.

**Acute dermal toxicity-** LD50: > 2,000 mg/kg

**Species:** guinea pig

**Remarks:** Minimal hazard by skin contact with liquid or vapor. This material may be absorbed through the skin. High dermal doses (most likely achieved from exposure to undiluted liquid) may cause weakness, headache and nausea. Extensive and prolonged contact with skin may cause confusion, anxiety, decreased blood pressure, and CNS depression with collapse and coma.

**Skin corrosion/irritation-** causes moderate skin irritation.

**Serious eye damage/eye irritation-** causes moderate eye damage.

**Respiratory or skin sensitization:** this product is not expected to cause skin sensitization.

**Reproductive toxicity:** OECD Test No. 416: Two-Generation Reproduction Toxicity Study (Mouse, Male and Female); NOAEL: 720 mg/kg; NOAEL: 720 mg/kg; NOAEL: 720 mg/kg; Ingestion

**Developmental toxicity:** Rat, Male and Female; NOAEL: 100 mg/kg; NOAEL: 30 mg/kg; Ingestion

**Specific target organ toxicity -single exposure:** Not classified.

**Specific target organ toxicity -repeated exposure:** Not classified.

**Aspiration hazard:** Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

### Potassium Hydroxide (CAS 1310-58-3)-

#### **Toxicity:**

**Acute oral toxicity-** LD50 Oral: 365 mg/kg

**Species:** Rat

**Remarks:** Corrosive to all tissues. Severe eye, skin and respiratory irritant. Can cause burns to any tissue it comes in contact with.

**Acute inhalation toxicity-** No data available

**Acute dermal toxicity-** No data available.

**Skin corrosion/irritation-** causes severe skin burns and eye damage.

**Serious eye damage/eye irritation-** causes severe eye burns. Causes severe eye irritation.

**Respiratory or skin sensitization:** no data available

**Reproductive toxicity:** no data available

**Specific target organ toxicity -single exposure:** Not classified.

**Specific target organ toxicity -repeated exposure:** Not classified.

**Aspiration hazard:** not classified

**Other Chronic effects:** prolonged inhalation may be harmful

**D-Limonene (CAS 5989-27-5)-**

**Toxicity:**

**Acute oral toxicity-** LD50 Oral: >2 g/kg

**Species:** rat

**Remarks:** The product may be fatal if swallowed and enters airways.

**Acute inhalation toxicity-** No data available

**Acute dermal toxicity-** LD50: >5 g/kg

**Species:** rabbit

**Skin corrosion/irritation-** The product is a skin irritant. The product may cause sensitization by skin contact.

**Serious eye damage/eye irritation-** no data available

**Respiratory or skin sensitization-** Inhalation may cause irritation of the nose, throat, and respiratory tract.

**Reproductive toxicity:** This product does not contain known reproductive or developmental toxins.

**Specific target organ toxicity -single exposure:** Not classified.

**Specific target organ toxicity -repeated exposure:** Not classified.

**Aspiration hazard:** not classified

## SECTION 12- ECOLOGICAL INFORMATION

**2-Butoxyethanol- (CAS 111-76-2)-**

**Ecotoxicity:**

**Aquatic toxicity (fish)-**LC-50: 1,474 mg/l

**Duration:** 96 hours

**Species:** Oncorhynchus mykiss,

**Aquatic toxicity (Aquatic Invertebrates)-** EC-50: 1,550 mg/l

**Duration:** 48 hours

**Species:** water flea

**Chronic hazards to the aquatic environment:**

**Toxicity (fish)-** NOEC >100 mg/l

**Duration:** 21 days

**Species:** Zebra Fish

**Toxicity (Aquatic Invertebrates)-** NOEC: 100 mg/l

**Duration:** 21 days

**Species:** daphnid

**Toxicity (Aquatic Plants)-** EC-50: 1,840 mg/l  
**Duration:** 72 hours  
**Species:** Algae (Pseudokirchneriella subcapitata)

**Persistence and degradability:** 90.4 % (28 d) Readily biodegradable

**Bioaccumulative potential:** Potential to bioaccumulate is low.

**Partition Coefficient n-octanol / water (log Kow) :** Log Kow: 0.81 20 °C

**Mobility in soil:** Expected to partition to water.

#### **Potassium Hydroxide (CAS 1310-58-3)-**

##### **Ecotoxicity:**

**Aquatic toxicity (fish)-LC-50:** 80 mg/l  
**Duration:** 96 hours  
**Species:** Western mosquito fish  
**Results:** harmful to aquatic life

**Persistence and degradability:** no data available

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

#### **D-Limonene (CAS 5989-27-5)-**

**Ecotoxicity:** According to the official classification this product may be very toxic to aquatic life. However, due to the physical properties of the product (density and volatility) it will not remain in the environment for an extended period of time.

**Aquatic toxicity (fish)-LC-50:** 0.1 to 1 mg/L  
**Species:** daphnia

**Persistence and degradability:** readily biodegradable.

**Bioaccumulative potential:** The geometric mean of three predicted BCF for d-limonene is 683, i.e. BCF < 2000 L/kg. Consistently the Log Kow is below 4.5. D-Limonene is not bioaccumulative.

**Mobility in soil:** Citrus extractives volatilize rapidly. Citrus extractives are expected to volatilize from soil or water to the air and oxidize to carbon dioxide in the presence of sunlight.

**Other remarks:** d-Limonene is readily biodegradable, and with a predicted BCF of 683 L/kg. All aquatic EC50/LC50 are higher than 0.1mg/L, therefore d-limonene should not be considered environmentally toxic (the official classification includes H410 for long lasting effects on the aquatic toxicity and hence, at least for the time being the substance shall be classified as such). D-Limonene is not PBT.

## **SECTION 13- DISPOSAL CONSIDERATIONS**

**Further information:** Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of as hazardous waste in compliance with local and national regulations.

## **SECTION 14- TRANSPORT INFORMATION**

Transport in accordance with all federal, state and local regulations.

##### **DOT-**

UN Number: UN 3266

UN proper shipping name: Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)  
Hazard class: 8  
Packing group: II

## SECTION 15- REGULATORY INFORMATION

**US federal regulations:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA Hazardous Substance List (40 CFR 302.4):**  
Potassium Hydroxide (CAS 1310-58-3)

**SARA 304 Emergency release notification:**  
Not regulated

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**  
Not listed.

**SARA 302 Extremely hazardous substance:**  
Not listed.

**SARA 311/312 Hazardous Chemical:**  
2-Butoxyethanol (CAS 111-76-2)- immediate (acute) health hazard ; delayed (chronic) health hazard ; fire hazard  
Potassium Hydroxide (CAS 1310-58-3)- immediate (acute) health hazard ; delayed (chronic) health hazard

**SARA 313 (TRI reporting):**  
2-Butoxyethanol (CAS 111-76-2)

### Other federal regulations-

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List:**  
Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**  
Not regulated.

### US state regulations-

**US - California Candidate Chemicals: Listed on initial list:**  
Potassium Hydroxide (CAS 1310-58-3)

**US. Massachusetts RTK - Substance List:**  
Potassium Hydroxide (CAS 1310-58-3)

**US. New Jersey Worker and Community Right-to-Know Act:**  
Not regulated

**US. Pennsylvania Worker and Community Right-to-Know Law:**  
Potassium Hydroxide (CAS 1310-58-3)

**US. Rhode Island RTK**  
Potassium Hydroxide (CAS 1310-58-3)

**US. California Proposition 65:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## SECTION 16- OTHER INFORMATION

References: Not available

Other Special Considerations: Not available

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