

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : LIQUID RENOVATE

Other means of identification : Not applicable

Recommended use : Laundry product

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : Product is sold ready to use.

Company : Ecolab Inc.
1 Ecolab Place
St. Paul, Minnesota USA 55102
1-800-352-5326

Emergency health information : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 06/27/2019

SECTION 2. HAZARDS IDENTIFICATION
GHS Classification

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

Skin corrosion : Category 1A

Serious eye damage : Category 1

Specific target organ systemic toxicity - repeated exposure (Oral) : Category 2 (Kidney)

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated

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clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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/doctor. Get medical advice/ attention if you feel unwell. Wash contaminated clothing before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

Store in a well-ventilated place. Keep cool. Store locked up.

Disposal:

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

Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
2-butoxyethanol	111-76-2	30 - 60
Diethylene Glycol	111-46-6	10 - 30
potassium hydroxide	1310-58-3	10 - 30

SECTION 4. FIRST AID MEASURES

- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
- If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet

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- Specific hazards during fire fighting : Fire Hazard
Keep away from heat and sources of ignition.
Flash back possible over considerable distance.
- Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
- Special protective equipment for fire-fighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Keep away from fire, sparks and heated surfaces. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
- Conditions for safe storage : Keep away from heat and sources of ignition. Do not store near acids. Keep away from oxidizing agents. Keep out of reach of children. Store in suitable labeled containers.
- Storage temperature : -30 °C to 40 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis

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2-butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m3	NIOSH REL
		TWA	50 ppm 240 mg/m3	OSHA Z1
Diethylene Glycol	111-46-6	TWA	10 mg/m3	AIHA WEEL
potassium hydroxide	1310-58-3	Ceiling	2 mg/m3	ACGIH
		Ceiling	2 mg/m3	NIOSH REL

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Wear eye protection/ face protection.

Hand protection : Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.
Wash face, hands and any exposed skin thoroughly after handling.
Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : cloudy, red brown

Odor : pungent

pH : 14.0 - 15.0, (100 %)

Flash point : 82 °C closed cup, Does not sustain combustion.

Odor Threshold : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : > 100 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 1.09 - 1.115

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Water solubility	: soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: No data available
VOC	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Acids Metals
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation, Eye contact, Skin contact
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Potential Health Effects

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Harmful if swallowed. Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain

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Inhalation : Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity : Acute toxicity estimate : 961.83 mg/kg
Acute inhalation toxicity : 4 h Acute toxicity estimate : 30.33 mg/l
Test atmosphere: vapor
Acute dermal toxicity : Acute toxicity estimate : 2,759 mg/kg
Skin corrosion/irritation : No data available
Serious eye damage/eye irritation : No data available
Respiratory or skin sensitization : No data available
Carcinogenicity : No data available
Reproductive effects : No data available
Germ cell mutagenicity : No data available
Teratogenicity : No data available
STOT-single exposure : No data available
STOT-repeated exposure : No data available
Aspiration toxicity : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : No data available
Toxicity to daphnia and other aquatic invertebrates : No data available
Toxicity to algae : No data available

Components

Toxicity to fish : 2-butoxyethanol
96 h LC50: 1,474 mg/l

Diethylene Glycol
96 h LC50 Pimephales promelas: 75,200 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : 2-butoxyethanol
48 h EC50: 690 mg/l

Diethylene Glycol
24 h EC50 Daphnia magna (Water flea): > 10,000 mg/l

Components

Toxicity to algae : 2-butoxyethanol

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72 h EC50: 911 mg/l

Diethylene Glycol
96 h EC50: 9,362 mg/l

Persistence and degradability

Biodegradable

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

- Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.
- RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste : D002 (Corrosive)

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

- UN number : 1814
- Description of the goods : Potassium hydroxide, solution
- Class : 8
- Packing group : II
- Environmentally hazardous : no

Sea transport (IMDG/IMO)

- UN number : 1814
- Description of the goods : POTASSIUM HYDROXIDE SOLUTION
- Class : 8
- Packing group : II
- Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

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EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
potassium hydroxide	1310-58-3	1000	6944

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

2-butoxyethanol	111-76-2	30 - 50 %
2-(2-(2-ethoxyethoxy)ethoxy)ethanol	112-50-5	10 - 20 %
2-(2-ethoxyethoxy)ethanol	111-90-0	0.1 - 1 %

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

California Cleaning Product Right to Know Act of 2017 (SB 258)

This regulation applies to this product.

Chemical Name	CAS-No.	Function	List(s)
2-butoxyethanol	111-76-2	Solvent	20
Diethylene Glycol	111-46-6	Solvent	Not Applicable
water	7732-18-5	Diluent	Not Applicable
potassium hydroxide	1310-58-3	Cleaning Agent	Not Applicable
2-(2-(2-ethoxyethoxy)ethoxy)ethanol	112-50-5	Solvent	Not Applicable

*refer to ecolab.com/sds for electronic links to designated lists

The ingredients of this product are reported in the following inventories:

United States TSCA Inventory :

All substances listed as active on the TSCA inventory

Canadian Domestic Substances List (DSL) :

All components of this product are on the Canadian DSL

Australia Inventory of Chemical Substances (AICS) :

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances :

not determined

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Japan. ENCS - Existing and New Chemical Substances Inventory :

On the inventory, or in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI) :

On the inventory, or in compliance with the inventory

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC) :

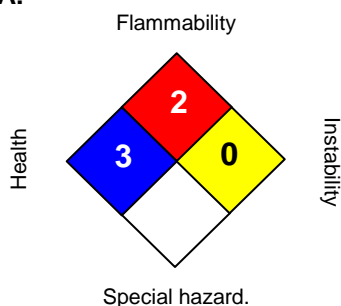
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) :

On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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Version : 1.2
Prepared by : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.