SAFETY DATA SHEET
MIKRO QUAT

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: MIKRO QUAT
Other means of identification: Not applicable
Recommended use: All Purpose Cleaner
Restrictions on use: Reserved for industrial and professional use.
Product dilution information: 0.2% - 0.8%

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: 10/11/2019

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Product AS SOLD
Acute toxicity (Oral): Category 4
Skin corrosion: Category 1B
Serious eye damage: Category 1

Product AT USE DILUTION
Not a hazardous substance or mixture.

GHS label elements

Product AS SOLD
Hazard pictograms:

Signal Word: Danger
Hazard Statements: Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary Statements
Prevention:
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. 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 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. If skin
irritation or rash occurs: Get medical advice/attention. Wash
contaminated clothing before reuse.
Storage:
Store locked up.
Disposal:
Dispose of contents/container to an approved waste disposal plant.

<table>
<thead>
<tr>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautionary Statements:</td>
</tr>
<tr>
<td>Prevention:</td>
</tr>
<tr>
<td>Wash hands thoroughly after handling.</td>
</tr>
<tr>
<td>Response:</td>
</tr>
<tr>
<td>Get medical advice/attention if you feel unwell.</td>
</tr>
<tr>
<td>Storage:</td>
</tr>
<tr>
<td>Store in accordance with local regulations.</td>
</tr>
</tbody>
</table>

Product AS SOLD
Other hazards: None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD
Pure substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride</td>
<td>68424-85-1</td>
<td>9.5</td>
</tr>
<tr>
<td>oxirane, methyl-, polymer with oxirane</td>
<td>9003-11-6</td>
<td>5 - 10</td>
</tr>
<tr>
<td>monoethanolamine</td>
<td>141-43-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Sodium Mercaptobenzothiazole</td>
<td>2492-26-4</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

Product AT USE DILUTION
No hazardous ingredients

SECTION 4. FIRST AID MEASURES

Product AS SOLD
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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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...
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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.

**Product AT USE DILUTION**

<table>
<thead>
<tr>
<th>In case of eye contact</th>
<th>Rinse with plenty of water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In case of skin contact</td>
<td>Rinse with plenty of water.</td>
</tr>
<tr>
<td>If swallowed</td>
<td>Rinse mouth. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>If inhaled</td>
<td>Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

**SECTION 5. FIRE-FIGHTING MEASURES**

**Product AS SOLD**

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

Unsuitable extinguishing media: None known.

Specific hazards during fire fighting: Not flammable or combustible.

Hazardous combustion products: Decomposition products may include the following materials:

- Carbon oxides
- Nitrogen oxides (NOx)
- Sulfur oxides
- Oxides of phosphorus

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**

**Product AS SOLD**

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. 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: Stop leak if safe to do so. Contain spillage, and then collect with non-
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containment and cleaning up: combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Product AT USE DILUTION

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Environmental precautions: No special environmental precautions required.

Methods and materials for containment and cleaning up: 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). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD

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. 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 out of reach of children. Store in suitable labeled containers.

Storage temperature: 0 °C to 50 °C

Product AT USE DILUTION

Advice on safe handling: Wash hands after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE). For personal protection see section 8.

Conditions for safe storage: Keep out of reach of children. Store in suitable labeled containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product AS SOLD

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Form of exposure</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>monoethanolamine</td>
<td>141-43-5</td>
<td>TWA</td>
<td>3 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>6 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>3 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>6 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>3 ppm</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1,900 mg/m3</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Engineering measures</th>
<th>1,900 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.} )</td>
<td></td>
</tr>
</tbody>
</table>

**Personal protective equipment**

<table>
<thead>
<tr>
<th>Eye protection</th>
<th>( \text{Wear eye protection/ face protection.} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand protection</td>
<td>( \text{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.} )</td>
</tr>
<tr>
<td>Skin protection</td>
<td>( \text{Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing} )</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>( \text{When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.} )</td>
</tr>
</tbody>
</table>

**Hygiene measures**

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

**Product AT USE DILUTION**

<table>
<thead>
<tr>
<th>Engineering measures</th>
<th>( \text{Good general ventilation should be sufficient to control worker exposure to airborne contaminants.} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal protective equipment</td>
<td>( \text{No special protective equipment required.} )</td>
</tr>
<tr>
<td>Respiration protection</td>
<td>( \text{No personal respiratory protective equipment normally required.} )</td>
</tr>
</tbody>
</table>

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Product AS SOLD</th>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>dark red</td>
<td>light red</td>
</tr>
<tr>
<td>Odor</td>
<td>citrus</td>
<td>Disinfectants</td>
</tr>
<tr>
<td>pH</td>
<td>11.35, (100%)</td>
<td>10.0 - 10.5</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>
### SECTION 10. STABILITY AND REACTIVITY

**Product AS SOLD**

**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**: None known.

**Incompatible materials**: Acids

**Hazardous decomposition products**: In case of fire hazardous decomposition products may be produced such as:
- Carbon oxides
- Nitrogen oxides (NOx)
- Sulfur oxides
- Oxides of phosphorus

### SECTION 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**: Inhalation, Eye contact, Skin contact

**Potential Health Effects**

**Product AS SOLD**

**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.

<table>
<thead>
<tr>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eyes</strong></td>
</tr>
<tr>
<td><strong>Skin</strong></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
<tr>
<td><strong>Chronic Exposure</strong></td>
</tr>
</tbody>
</table>

**Experience with human exposure**

**Product AS SOLD**
- **Eye contact**: Redness, Pain, Corrosion, Irritation
- **Skin contact**: Redness, Pain, Corrosion
- **Ingestion**: Corrosion, Abdominal pain
- **Inhalation**: Respiratory irritation, Cough

<table>
<thead>
<tr>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
</tbody>
</table>

**Toxicity**

**Product AS SOLD**
- **Acute oral toxicity**: LD50: > 300 mg/kg
- **Acute inhalation toxicity**: No data available
- **Acute dermal toxicity**: No data available
- **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
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Aspiration toxicity : No data available

Components

Acute inhalation toxicity : Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride
4 h LC50 Rat: 0.054 mg/l
Test atmosphere: dust/mist
oxirane, methyl-, polymer with oxirane
4 h LD50 Rat: 1 mg/l
Test atmosphere: dust/mist
monoethanolamine
4 h LC50 Rat: > 1.6 mg/l
Test atmosphere: dust/mist
ethanol
4 h LC50 Rat: 117 mg/l
Test atmosphere: vapor

Components

Acute dermal toxicity : Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride
LD50 Rabbit: 3,340 mg/kg
monoethanolamine
LD50 Rabbit: 1,025 mg/kg
ethanol
LD50 Rabbit: > 15,800 mg/kg
Sodium Mercaptobenzothiazole
LD50 Rabbit: > 7,980 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Product AS SOLD

Ecotoxicity

Environmental Effects : Very toxic to aquatic life. Toxic to aquatic life with long lasting 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 : oxirane, methyl-, polymer with oxirane
96 h LC50 Fish: > 100 mg/l
ethanol
96 h LC50 Pimephales promelas: > 100 mg/l
Sodium Mercaptobenzothiazole
96 h LC50: 0.73 mg/l
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Components
Toxicity to daphnia and other aquatic invertebrates: Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride
48 h EC50 Daphnia magna (Water flea): 0.016 mg/l

monoethanolamine
48 h LC50: 65 mg/l

Persistence and degradability
Product AS SOLD
Biodegradable

Product AT USE DILUTION
Biodegradable

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Product AS SOLD
Disposal methods: Do not contaminate ponds, waterways or ditches with chemical or used container. 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.

Product AT USE DILUTION
Disposal methods: Do not contaminate ponds, waterways or ditches with chemical or used container. 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.

SECTION 14. TRANSPORT INFORMATION

Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.
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Land transport (DOT)
Not dangerous goods

Sea transport (IMDG/IMO)

<table>
<thead>
<tr>
<th>UN number</th>
<th>Description of the goods</th>
<th>Class</th>
<th>Packing group</th>
<th>Marine pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>3082</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (quaternary ammonium compound)</td>
<td>9</td>
<td>III</td>
<td>yes</td>
</tr>
</tbody>
</table>

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPA Registration number : 1677-21

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

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

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Function</th>
<th>List(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>7732-18-5</td>
<td>Diluent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride</td>
<td>68424-85-1</td>
<td>Biocide</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>oxirane, methyl-, polymer with oxirane</td>
<td>9003-11-6</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>monoethanolamine</td>
<td>141-43-5</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Chelating agent</td>
<td>Withheld</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Sodium Mercaptobenzothiazole</td>
<td>2492-26-4</td>
<td>Processing Aid</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Fragrance Ingredient(s)</td>
<td>Not Available</td>
<td>Fragrance</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Alkyl Amines</td>
<td>Withheld</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Substituted carboxylic acid salt</td>
<td>Withheld</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
The ingredients of this product are reported in the following inventories:

1907/2006 (EU) : not determined

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

Japan. ENCS - Existing and New Chemical Substances Inventory : not determined

Korea. Korean Existing Chemicals Inventory (KECI) : not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS) : not determined

China. Inventory of Existing Chemical Substances in China (IECSC) : On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) : not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD

NFPA:  
HMIS III:

HEALTH

FLAMMABILITY

PHYSICAL HAZARD

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

MIKRO QUAT

Issuing date: 10/11/2019
Version: 1.1
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.