



## SAFETY DATA SHEET

### DRYSAN DUO

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DRYSAN DUO

Other means of identification : Not applicable

Recommended use : Sanitizer - Food contact surface

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : No dilution information provided.

Company : Ecolab Inc.  
370 N. Wabasha Street  
St. Paul, Minnesota USA 55102  
1-800-352-5326

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

Issuing date : 06/17/2015

#### SECTION 2. HAZARDS IDENTIFICATION

##### GHS Classification

Flammable liquids : Category 4

##### GHS Label element

Signal Word : Warning

Hazard Statements : Combustible liquid.

Precautionary Statements : **Prevention:**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
**Response:**  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
**Storage:**  
Store in a well-ventilated place. Keep cool.  
**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 (%) |
|---|------------|-------------------|
| propan-2-ol   | 67-63-0    | 10.89             |
| Hydrogen peroxide   | 7722-84-1  | 0.045             |
| Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride | 68424-85-1 | 0.016             |
| Octyl decyl dimethyl ammonium chloride                              | 32426-11-2 | 0.012             |
| Didecyl Dimethyl Ammonium Chloride                                  | 7173-51-5  | 0.007             |
| Diocetyl dimethyl ammonium chloride                                 | 5538-94-3  | 0.005             |

#### SECTION 4. FIRST AID MEASURES

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|   |  |
|---|--|
| In case of eye contact                                      | : Rinse with plenty of water.  |
| In case of skin contact                                     | : Rinse with plenty of water.  |
| If swallowed  | : Rinse mouth. Get medical attention if symptoms occur.                        |
| If inhaled  | : Get medical attention if symptoms occur.                                     |
| Protection of first-aiders                                  | : No special precautions are necessary for first aid responders.               |
| Notes to physician  | : No specific measures identified.   |
| 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   |
| Specific hazards during fire fighting          | : Fire Hazard<br>Keep away from heat and sources of ignition.<br>Flash back possible over considerable distance.  |
| Hazardous combustion products                  | : Decomposition products may include the following materials:<br>Carbon oxides<br>Nitrogen oxides (NOx)<br>Sulfur oxides<br>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

|   |  |
|---|--|
| Personal precautions, protective equipment and emergency procedures | : Remove all sources of ignition. 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. |

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#### SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Keep away from fire, sparks and heated surfaces. Wash hands thoroughly after handling.
- Conditions for safe storage : Keep away from heat and sources of ignition. Keep away from oxidizing agents. Keep out of reach of children. Store in suitable labeled containers.
- Storage temperature : 5 °C to 40 °C

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Ingredients with workplace control parameters

| Ingredients | CAS-No. | Form of exposure | Permissible concentration          | Basis     |
|-------------|---------|------------------|------------------------------------|-----------|
| propan-2-ol | 67-63-0 | TWA              | 200 ppm                            | ACGIH     |
|             |         | STEL             | 400 ppm                            | ACGIH     |
|             |         | TWA              | 400 ppm<br>980 mg/m <sup>3</sup>   | NIOSH REL |
|             |         | STEL             | 500 ppm<br>1,225 mg/m <sup>3</sup> | NIOSH REL |
|             |         | TWA              | 400 ppm<br>980 mg/m <sup>3</sup>   | OSHA Z1   |

##### Biological occupational exposure limits

| Component   | CAS-No. | Control parameters | Sampling time | Sampling time | Permissible concentration | Basis                                     |
|-------------|---------|--------------------|---------------|---------------|---------------------------|---|
| propan-2-ol | 67-63-0 | Acetone            | Urine         |               | 40 mg/l                   | ACGIH - Biological Exposure Indices (BEI) |

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

##### Personal protective equipment

- Eye protection : No special protective equipment required.
- Hand protection : No special protective equipment required.
- Skin protection : No special protective equipment required.
- Respiratory protection : No personal respiratory protective equipment normally required.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid

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|   |  |
|---|--|
| Color                                   | : clear, colorless   |
| Odor                                    | : alcoholic  |
| pH                                      | : 5.5 - 6.5, 100 %   |
| Flash point                             | : 39 °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 | : > 35 °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                        | : 0.975 - 0.989  |
| 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

|                                    |  |
|------------------------------------|--|
| 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             | : None known.  |
| Hazardous decomposition products   | : Decomposition products may include the following materials:<br>Carbon oxides<br>Nitrogen oxides (NOx)<br>Sulfur oxides<br>Oxides of phosphorus |

### SECTION 11. TOXICOLOGICAL INFORMATION

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

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exposure

### Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.  
Skin : Health injuries are not known or expected under normal use.  
Ingestion : Health injuries are not known or expected under normal use.  
Inhalation : Health injuries are not known or expected under normal use.  
Chronic Exposure : Health injuries are not known or expected under normal use.

### Experience with human exposure

Eye contact : No symptoms known or expected.  
Skin contact : No symptoms known or expected.  
Ingestion : No symptoms known or expected.  
Inhalation : No symptoms known or expected.

### Toxicity

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg  
Acute inhalation toxicity : No data available  
Acute dermal toxicity : Acute toxicity estimate : > 5,000 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

### Ingredients

Acute inhalation toxicity : propan-2-ol  
4 h LC50 Rat: > 30 mg/l  
  
Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride  
4 h LC50 Rat: > 0.054 mg/l  
  
Octyl decyl dimethyl ammonium chloride  
4 h LC50 Rat: 0.07 mg/l

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Didecyl Dimethyl Ammonium Chloride  
4 h LC50 Rat: 0.07 mg/l

Diocetyl dimethyl ammonium chloride  
4 h LC50 Rat: 0.07 mg/l

### 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

#### Ingredients

Toxicity to fish : propan-2-ol  
96 h LC50 Pimephales promelas (fathead minnow): 9,640 mg/l

Octyl decyl dimethyl ammonium chloride  
96 h LC50 Fish: 1 mg/l

Didecyl Dimethyl Ammonium Chloride  
96 h LC50 Fish: 1 mg/l

#### Ingredients

Toxicity to daphnia and other aquatic invertebrates : propan-2-ol  
LC50 Daphnia magna (Water flea): > 10,000 mg/l

Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride  
48 h EC50: 0.0059 mg/l

Diocetyl dimethyl ammonium chloride  
48 h EC50 Daphnia: 0.1 mg/l

#### Ingredients

Toxicity to algae : Hydrogen peroxide  
72 h EC50: 1.38 mg/l

#### Persistence and degradability

No data available

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Other adverse effects

No data available

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### 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 Act Hazardous waste : D001 (Ignitable)

### 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)**

Not dangerous goods

**Sea transport (IMDG/IMO)**

Not dangerous goods

### SECTION 15. REGULATORY INFORMATION

EPA Registration number : 1677-247

**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** : Fire Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**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.

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

**United States TSCA Inventory :**

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On 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 :**

On the inventory, or in compliance with the inventory

**Japan. ENCS - Existing and New Chemical Substances Inventory :**

On the inventory, or in compliance with the inventory

**Japan. ISHL - Inventory of Chemical Substances (METI) :**

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) :**

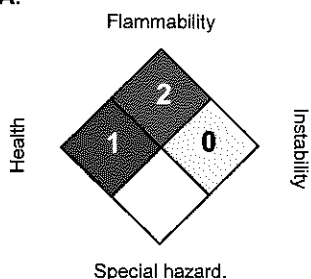
On the inventory, or in compliance with the inventory

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

On the inventory, or in compliance with the inventory

### SECTION 16. OTHER INFORMATION

**NFPA:**



**HMIS III:**

|                 |   |
|-----------------|---|
| HEALTH          | 1 |
| FLAMMABILITY    | 2 |
| PHYSICAL HAZARD | 0 |

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

Issuing date : 06/17/2015  
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 Material 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.