

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : **ฟิวเจอร์ ดีซี**
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Other means of identification : Not applicable

Recommended use : Sanitary cleaner

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : No dilution information provided.

Company : Ecolab Ltd.
101/97 Navanokorn Industrial Estate,
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SECTION 2. HAZARDS IDENTIFICATION
GHS Classification

Acute toxicity (Inhalation) : Category 4
Skin corrosion/irritation : Category 2
Serious eye damage/eye irritation : Category 1
Acute aquatic toxicity : Category 2
Chronic aquatic toxicity : Category 3

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Causes skin irritation.
Causes serious eye damage.
Harmful if inhaled.
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/ eye protection/ face protection.
Response:
IF ON SKIN: Wash with plenty of soap and water. IF INHALED:

SAFETY DATA SHEET

Future DC

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. 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 occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

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 (%)
triphosphoric acid, pentasodium salt	7758-29-4	1 - 5
alcohol ethoxylate	68551-12-2	1 - 5
sodium metasilicate	6834-92-0	1 - 5
Alkyl (C14 50%; C12 40%; C16 10%) dimethyl benzyl ammonium chloride	68424-85-1	1 - 5

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.
- 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 : None known.
- Specific hazards during fire fighting : Exposure to decomposition products may be a hazard to health.

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- Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
Nitrogen oxides (NO_x)
- Special protective equipment for fire-fighters : In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. 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. 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 : 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

- Advice on safe handling : Do not ingest. Avoid contact with skin and eyes. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not get in eyes, on skin, or on clothing.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
- Storage temperature : 10 °C to 50 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

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

Personal protective equipment

- Eye protection : Wear chemical splash goggles.
Face-shield

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Hand protection	: Wear the following personal protective equipment: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves
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	: clear, light green
Odor	: Floral
Flash point	: Not applicable
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	: 1.07 - 1.08
Water solubility	: No data available
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	: No data available
Molecular weight	: No data available
VOC	: No data available

SECTION 10. STABILITY AND REACTIVITY

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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	: Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects

Eyes	: Causes serious eye damage.
Skin	: Causes skin irritation.
Ingestion	: Causes digestive tract burns.
Inhalation	: Harmful if inhaled. 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, Irritation, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg
Acute inhalation toxicity	: 4 h Acute toxicity estimate : 2.45 mg/l
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

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Future DC

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 : Toxic to aquatic life. Harmful 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

Ingredients

Toxicity to fish : alcohol ethoxylate
96 h LC50 Fish: 1.5 mg/l

sodium metasilicate
96 h LC50 Fish: 210 mg/l

Ingredients

Toxicity to daphnia and other aquatic invertebrates : triphosphoric acid, pentasodium salt
48 h EC50 Daphnia: > 100 mg/l

Alkyl (C14 50%; C12 40%; C16 10%) dimethyl benzyl ammonium chloride
48 h EC50 Daphnia magna (Water flea): 0.016 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

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.

The product should not be allowed to enter drains, water courses or the soil.

SAFETY DATA SHEET

Future DC

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

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

Not dangerous goods

Sea transport (IMDG/IMO)

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

United States TSCA Inventory :

not determined

Canadian Domestic Substances List (DSL) :

This product contains the following components that are not on the Canadian DSL nor NDSL.

Australia Inventory of Chemical Substances (AICS) :

not determined

New Zealand. Inventory of Chemical Substances :

not determined

Japan. ENCS - Existing and New Chemical Substances Inventory :

not determined

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

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) :

not determined

SECTION 16. OTHER INFORMATION

Issuing date : 18.03.2016
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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.

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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.