SAFETY DATA SHEET

KLEER KLENZ

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : KLEER KLENZ
Other means of identification : Not applicable.
Recommended use : Heavy duty cleaner
Product dilution information : 0.15 % - 15.0 %
Company : Ecolab New Zealand
2 Daniel Place
Te Rapa, Hamilton New Zealand
+64 7 958 2319
Emergency telephone number : 0800 243 622 (0800 CHEMCALL)
Issuing date : 10.05.2016

Section: 2. HAZARDS IDENTIFICATION

HSNO Hazard classification

Product AS SOLD
Corrosive to Metals : 8.1 A
Acute toxicity (Oral) : 6.1 D
Acute toxicity (Inhalation) : 6.1 D
Acute toxicity (Dermal) : 6.1 E
Skin corrosion : 8.2 B
Serious eye damage : 8.3 A
Aquatic toxicity (Acute or Chronic) : 9.1 D
Ecotoxic to soil environment : 9.2 B
Ecotoxic to terrestrial vertebrates : 9.3 C

Product AT USE DILUTION
Corrosive to Metals : 8.1 A
Skin corrosion : 8.2 B
Serious eye damage : 8.3 A
Aquatic toxicity (Acute or Chronic) : 9.1 D
Ecotoxic to soil environment : 9.2 C

GHS Label element
Product AS SOLD
Hazard pictograms :

Signal Word : Danger
Hazard Statements : May be corrosive to metals.
                  Harmful if swallowed.
                  May be harmful in contact with skin.
Causes severe skin burns and eye damage. Harmful if inhaled. Harmful to aquatic life. Toxic to the soil environment. Harmful to terrestrial vertebrates.

Precautionary Statements:

**Prevention:**
Keep only in original container. Do not breathe dusts or mists. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 or doctor/ physician. Specific treatment (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.

**Storage:**
Store locked up. Store in corrosive resistant container with a resistant inner liner.

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

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### Product AT USE DILUTION

**Hazard pictograms:**

![Signal Word: Danger]

**Signal Word:** Danger

**Hazard Statements:**
May be corrosive to metals. Causes severe skin burns and eye damage. Harmful to aquatic life. Harmful to the soil environment.

**Precautionary Statements:**

**Prevention:**
Keep only in original container. Wash skin thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 or doctor/ physician. Specific treatment (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

**Storage:**
SAFETY DATA SHEET

KLEER KLENZ

Store locked up. Store in corrosive resistant container with a resistant inner liner.

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

Product AS SOLD
Other hazards: Mixing this product with acid or ammonia releases chlorine gas.

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>sodium hydroxide</td>
<td>1310-73-2</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Sodium Carbonate(soda)</td>
<td>497-19-8</td>
<td>30 - 60</td>
</tr>
</tbody>
</table>

Product AT USE DILUTION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration: (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>1310-73-2</td>
<td>5 - 10</td>
</tr>
</tbody>
</table>

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.

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.

Product AT USE DILUTION
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.

Section: 5. FIREFIGHTING 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 firefighting: Exposure to decomposition products may be a hazard to health.

Hazardous combustion products: Decomposition products may include the following materials:
- Carbon oxides
- Metal oxides
- Oxides of phosphorus

Special protective equipment for firefighters: 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.

Hazchem Code: 2W

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 containment and cleaning up: Sweep up and shovel into suitable containers for disposal.

Product AT USE DILUTION

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). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

**Product AS SOLD**

**Emergency Management Trigger Levels**

The following trigger level applies:

- **Emergency Plan**: 1,000 L
- **Signage**: 250 L

**Section: 7. HANDLING AND STORAGE**

**Product AS SOLD**

Advice on safe handling: Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not get in eyes, on skin, or on clothing. Mixing this product with acid or ammonia releases chlorine gas.


Storage temperature: 0 °C to 30 °C

**Product AT USE DILUTION**

Advice on safe handling: Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not get in eyes, on skin, or on clothing.


**Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Product AS SOLD**

Components 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>sodium hydroxide</td>
<td>1310-73-2</td>
<td>WES-Ceiling</td>
<td>2 mg/m3</td>
<td>NZ OEL</td>
</tr>
</tbody>
</table>

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

**Personal protective equipment**

- **Eye protection**: Safety goggles
  - Face-shield
- **Hand protection**: Wear the following personal protective equipment:
  - Standard glove type.
  - Laminate film
  - Nitrile
  - Unsupported neoprene
  - PVC
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.

**Product AT USE DILUTION**

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

**Personal protective equipment**

**Eye protection**: Safety goggles
Face-shield

**Hand protection**: Wear the following personal protective equipment:
Standard glove type.
Laminate film
Nitrile
Unsupported neoprene
PVC
Natural rubber
Neoprene/natural rubber blend
Impervious gloves
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.

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**Section: 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Product AS SOLD</th>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>powder</td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>Chlorine</td>
</tr>
<tr>
<td>pH</td>
<td>12.5 - 14.0, 1%</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable., Does not sustain combustion.</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>no data available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

KLEER KLENZ

Initial boiling point and boiling range: no data available
Evaporation rate: no data available
Flammability (solid, gas): no data available
Upper explosion limit: no data available
Lower explosion limit: no data available
Vapour pressure: no data available
Relative vapour density: no data available
Relative density: 0.99 - 1.01
Water solubility: soluble
Solubility in other solvents: no data available
Partition coefficient: n-octanol/water: no data available
Auto-ignition 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

**Product AS SOLD**

Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Mixing this product with acid or ammonia releases chlorine gas.
Conditions to avoid: None known.
Incompatible materials: Acids
Metals
Hazardous decomposition products: No decomposition if stored and applied as directed.

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: May be harmful in contact with skin. Causes severe skin burns.
Ingestion: Harmful if swallowed. 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.

**Product AT USE DILUTION**

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Causes serious eye damage.</th>
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</tr>
<tr>
<td>Ingestion</td>
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</tr>
<tr>
<td>Inhalation</td>
<td>May cause nose, throat, and lung irritation.</td>
</tr>
<tr>
<td>Chronic Exposure</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

**Experience with human exposure**

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Redness, Pain, Corrosion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>Redness, Pain, Corrosion</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Corrosion, Abdominal pain</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Respiratory irritation, Cough</td>
</tr>
</tbody>
</table>

**Product AT USE DILUTION**

<table>
<thead>
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<th>Eye contact</th>
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</tr>
<tr>
<td>Inhalation</td>
<td>Respiratory irritation, Cough</td>
</tr>
</tbody>
</table>

**Toxicity**

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Acute toxicity estimate : 909.41 mg/kg</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>4 h Acute toxicity estimate : 3.67 mg/l</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Acute toxicity estimate : 2,612 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>no data available</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>no data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>no data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>no data available</td>
</tr>
<tr>
<td>Reproductive effects</td>
<td>no data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>no data available</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>no data available</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>no data available</td>
</tr>
</tbody>
</table>

902532 8 / 11
STOT - repeated exposure : no data available
Aspiration toxicity : no data available

Section: 12. ECOLOGICAL INFORMATION

Product AS SOLD
Ecotoxicity
Environmental Effects : Harmful to aquatic life.

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 : Sodium Carbonate(soda)
96 h LC50 Lepomis macrochirus (Bluegill sunfish): 300 mg/l

Components
Toxicity to daphnia and other aquatic invertebrates : sodium hydroxide
48 h EC50: 40 mg/l
Sodium Carbonate(soda)
48 h EC50 Ceriodaphnia (water flea): 213.5 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

Product AS SOLD
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.

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.
SAFETY DATA SHEET

KLEER KLENZ

Product AT USE DILUTION
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.

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.

Land transport (NZ_DG)
UN number: 1823
Description of the goods: SODIUM HYDROXIDE, SOLID
Class: 8
Packing group: II
Hazchem Code: 2W
Environmentally hazardous: No

Sea transport (IMDG/IMO)
UN number: 1823
Description of the goods: SODIUM HYDROXIDE, SOLID
Class: 8
Packing group: II
Marine pollutant: No
Special precautions for user: None

Section: 15. REGULATORY INFORMATION

Product AS SOLD
HSNO Approval Number: HSR002526

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

United States TSCA Inventory:
On TSCA Inventory

Canadian Domestic Substances List (DSL):
All components of this product are on the Canadian DSL.

Australia. Industrial Chemical (Notification and Assessment) Act:
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand:
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 :
On the inventory, or in compliance with the inventory

**Section: 16. OTHER INFORMATION**

Issuing date : 10.05.2016
version : 1.0
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.