1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name
LOW TEMP DETERGENT

Other means of identification

Product Code(s)
146LOTDET 5G

UN-Number
UN1760

Synonyms
LTMDC

Recommended use of the chemical and restrictions on use

Recommended Use
Institutional dish machine detergent

Uses advised against
No information available

Supplier's details

Supplier Address
CLARK ASSOCIATES, INC.
2205 OLD PHILADELPHIA PIKE
LANCASTER, PA 17602
TEL: 717-291-9700

Emergency telephone number

Emergency Telephone Number
CHEM-TEL, INC.
24 Hour Emergency Contact 1-800-255-3924

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Skin Corrosion/Irritation</th>
<th>Category 1  Subcategory 1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Emergency Overview

<table>
<thead>
<tr>
<th>Signal Word</th>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Statements</td>
<td></td>
</tr>
<tr>
<td>• Causes severe skin burns and eye damage</td>
<td></td>
</tr>
</tbody>
</table>
Precautionary Statements

**Prevention**
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection

**General Advice**
- Immediately call a POISON CENTER or doctor/physician

**Eyes**
- 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.

**Skin**
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse

**Inhalation**
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Ingestion**
- IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Storage**
- Store locked up

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

---

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>10-20</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

---

**4. FIRST AID MEASURES**
Description of necessary first-aid measures

Eye Contact  Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact  Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Immediate medical attention is required.

Inhalation  Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion  Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects  No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician  Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media  None

Specific Hazards Arising from the Chemical  No information available

Explosion Data

Sensitivity to Mechanical Impact  None.
Sensitivity to Static Discharge  None

Protective Equipment and Precautions for Firefighters  As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions  Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Stop leak if you can do it without risk. If spilled, take caution, as material can cause surfaces to become very slippery.

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

Methods and materials for containment and cleaning up

Methods for Containment  Stop leak if you can do it without risk
Methods for Cleaning Up  Contain spill, dilute with water and neutralize as required. Wash away small spills with plenty of water. Large spillage: Soak up with inert absorbent material.

7. HANDLING AND STORAGE
Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Do not take internally. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep from freezing. Keep container closed when not in use.

Incompatible Products

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Ceiling: 2 mg/m³</td>
<td>TWA: 2 mg/m³</td>
<td>IDLH: 10 mg/m³</td>
</tr>
<tr>
<td>1310-73-2</td>
<td>(vacated) Ceiling: 2 mg/m³</td>
<td></td>
<td>Ceiling: 2 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures
Shower
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Chemical resistant goggles must be worn. Face-shield.

Skin and Body Protection

Respiratory Protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Appearance</th>
<th>Remarks/ - Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>12.8</td>
<td>Clear</td>
<td>(4 % solution)</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>&gt; 100 °C / &gt; 212 °F</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>upper flammability limit</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>lower flammability limit</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.22</td>
<td>None known</td>
<td></td>
</tr>
</tbody>
</table>
Water Solubility: 100%  None known
Solubility in other solvents: No data available  None known
Partition coefficient: n-octanol/water: No data available  None known
Autoignition Temperature: No data available  None known
Decomposition Temperature: No data available  None known
Viscosity: 5 cps  None known

Flammable Properties: Not flammable
Explosive Properties: No data available
Oxidizing Properties: No data available

VOC Content (%): No data available

### 10. STABILITY AND REACTIVITY

**Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Spills or careless handling. Incompatible products.

**Incompatible materials**


**Hazardous decomposition products**

None known based on information supplied.

### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

- **Inhalation**: May cause irritation of respiratory tract.
- **Eye Contact**: Causes serious eye damage.
- **Skin Contact**: Causes severe skin burns.
- **Ingestion**: May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>-</td>
<td>1350 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms**: No information available.
Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product
The following values are calculated based on chapter 3.1 of the GHS document:
LD50 Oral 25000 mg/kg; Acute toxicity estimate
LD50 Dermal 3034 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>LC50 96 h: = 45.4 mg/L static (Oncorhynchus mykiss)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability No information available.
Bioaccumulation No information available.

Other Adverse Effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations
Contaminated Packaging Do not re-use empty containers.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Toxic</td>
</tr>
<tr>
<td></td>
<td>Corrosive</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
UN-Number UN1760
Proper shipping name Corrosive liquids, n.o.s.
Hazard Class 8
Packing Group II
Reportable Quantity (RQ) Sodium hydroxide: RQ kg= 1020.45
Description UN1760, Corrosive liquids, n.o.s. (Sodium hydroxide), 8, II, RQ
Emergency Response Guide Number 154
<table>
<thead>
<tr>
<th>Standards</th>
<th>UN-Number</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>UN1760</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II</td>
<td>UN1760, Corrosive liquid, n.o.s. (Sodium hydroxide), 8, II</td>
</tr>
<tr>
<td>ICAO</td>
<td>UN1760</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II</td>
<td>UN1760, Corrosive liquid, n.o.s., 8, II</td>
</tr>
<tr>
<td>IATA</td>
<td>UN1760</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II</td>
<td>UN1760, Corrosive liquid, n.o.s., 8, II</td>
</tr>
<tr>
<td>IMDG/IMO</td>
<td>UN1760</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II, S-B</td>
<td>UN1760, Corrosive liquid, n.o.s. (Sodium hydroxide), 8, II</td>
</tr>
<tr>
<td>RID</td>
<td>UN1760</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II</td>
<td>UN1760, Corrosive liquid, n.o.s. (Sodium hydroxide), 8, II</td>
</tr>
<tr>
<td>ADR</td>
<td>UN1760</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II</td>
<td>UN1760, Corrosive liquid, n.o.s. (Sodium hydroxide), 8, II</td>
</tr>
<tr>
<td>ADR/RID-Labels</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADN</td>
<td>Corrosive liquid, n.o.s.</td>
<td>8</td>
<td>II</td>
<td>UN1760, Corrosive liquid, n.o.s. (Sodium hydroxide), 8, II</td>
<td></td>
</tr>
<tr>
<td>ADR</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>DSL</td>
<td></td>
</tr>
<tr>
<td>NDSL</td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td></td>
</tr>
</tbody>
</table>

Legend

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes</th>
<th>No</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Hazard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
</tbody>
</table>

U.S. State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>X</td>
</tr>
</tbody>
</table>

Issuing Date: 18-Apr-2013
Revision Date: 18-Apr-2017

General Disclaimer
The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet