SAFETY DATA SHEET

1. Identification

Product Identifier: Multi-Temp Dish Detergent
Other means of identification:
Product code: CU-5412
Recommended use: Premium dish detergent.
Recommended restrictions: Professional use only.
Manufacturer information:
Company name: Chemical Universe, Inc.
Address: 1133 Saline St.
North Kansas City, MO 64116
Telephone: (816) 471-3602
Fax: (816) 474-3302
Emergency phone number:
PERS: (800) 633-8253
24 hour Emergency: (800) 633-8253

2. Hazard(s) Identification

Physical hazards: Not classified.
Health hazards:
Acute toxicity: Category 5
Serious eye damage: Category 1
Skin corrosion: Category 1B
Environmental hazards: Not classified.
OSHA defined hazards: Not listed.
Label elements:

Signal word: Danger.
Hazard statement: May be harmful if swallowed.
Causes severe skin burns and eye damage.
Precautionary statement:

Prevention:
Do not breathe dusts or mists. Wash hands and exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Response:
Call a POISON CENTER/doctor/medical professional if you feel unwell. IF SWALLOWED:
Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all
contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing
before reuse. IF INHALED: Remove person to fresh air and keep comfortable breathing.
Immediately call a POISON CENTER/doctor/medical professional. Specific treatment (see
Section 4 on the Safety Data Sheet). IF IN EYES: Rinse cautiously with water for several
minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage:
Store locked up.
Disposal:
Dispose of contents/container in accordance with local/regional/national/international
regulations.
Hazard(s) not otherwise
classified (HNOC):
None.
Supplemental information:
None.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>15-25</td>
<td></td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td>70-100</td>
<td></td>
</tr>
</tbody>
</table>

4. First-aid measures

- **Inhalation**: Move to fresh air. Call a physician if symptoms develop or persist.
- **Skin contact**: Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
- **Eye contact**: Rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention. Eye wash stations should be located in work area.
- **Ingestion**: Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting.
- **Most important symptoms/effects, acute and delayed**: Dermatitis. Rash.
- **Indication of immediate medical attention and special treatment needed**: Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
- **General information**: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

- **Suitable extinguishing media**: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
- **Unsuitable extinguishing media**: None known.
- **Specific hazards arising from the chemical**: During fire, gases hazardous to health may be formed.
- **Special protective equipment and precautions for firefighters**: Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.
- **Fire-fighting equipment/instructions**: Move containers from fire area if you can do so without risk.
- **Specific methods**: Use standard firefighting procedures and consider the hazards of other involved materials.
- **General fire hazards**: No unusual fire or explosion hazards noted.

6. Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**: Wear appropriate protective equipment and clothing during clean-up. Wear eye/face protection.
- **Methods and materials for containment and cleaning up**: Caution – spillages may be slippery.

- **Large spills**: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas.

- **Small spills**: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

- **Never return spills to original container for re-use**. For waste disposal, see section 13 of the SDS.
Environmental precautions  
Do not release into the environment (see section 12). Avoid discharge into areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling  
Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities  
Store in original tightly closed container. Do not store in extreme conditions.

8. Exposure controls/personal protection

Occupational exposure limits

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>PEL</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

US ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>STEL</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values  
No data available.

Appropriate engineering controls  
Emergency eye wash stations and showers should be readily accessible. Provide natural or mechanical ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection  
Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protection  
Wear appropriate chemical resistant gloves.

Respiratory protection  
Respiratory protection not required.

Thermal hazards  
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations  
When using do not smoke or use chewing tobacco. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical State  
Liquid.

Color  
Red.

Odor  
Characteristic.

Odor threshold  
Not available.

pH  
13-14

Melting/freezing point  
Not available.

Initial boiling point and boiling range  
>212°F (100°C)

Flash point  
>385°F (196°C)

Evaporation rate  
Not available.

Flammability  
Not available.

Flammability Limits  

### 10. Stability and reactivity

**Reactivity**
This product is stable and non-reactive under normal conditions of use.

**Chemical stability**
Material is stable under normal conditions.

**Possibility of hazardous reactions**
Hazardous polymerization does not occur.

**Conditions to avoid**
Heat, flames can cause product to decompose.

**Incompatible materials**
Strong acids, strong bases, strong oxidizing agents.

**Hazardous decomposition products**
Aldehydes, ketones, organic acids, carbon dioxide, carbon monoxide.

### 11. Toxicological information

**Information on likely routes of exposure**

- **Ingestion**
  Corrosive to mucous membranes, will damage tissue if there is prolonged contact.

- **Inhalation**
  Expected to be a low inhalation hazard.

- **Skin contact**
  Repeated and/or prolonged skin contact will cause burns.

- **Eye contact**
  Causes severe eye damage. May cause severe corneal injury.

**Symptoms related to the physical, chemical and toxicological characteristics**
Dermatitis. Rash.

**Acute toxicity**
May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Route and Species</th>
<th>LD$_{50}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Temp Dish Detergent (CAS mixture)</td>
<td><strong>Acute</strong></td>
<td><strong>Oral, rat</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Dermal, rabbit</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Estimates for product may be based on additional component data not shown

- **Skin corrosion/irritation**
  Causes severe skin burns.

- **Serious eye damage/irritation**
  Causes serious eye damage.

- **Respiratory sensitization**
  Not classified.

- **Skin sensitization**
  Not classified.

- **Germ cell mutagenicity**
  Not classified.

- **Carcinogenicity**
  Not considered a carcinogen.

Not Listed.

- **Reproductive toxicity**
  Not classified.
Specific target organ toxicity – single exposure Not classified.
Specific target organ toxicity – repeated exposure Not classified.
Aspiration hazard Not considered an aspiration hazard.

12. Ecological information

<table>
<thead>
<tr>
<th>Ecotoxicity</th>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Temp Dish Detergent (CAS mixture)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td></td>
<td>Daphnia</td>
<td>EC_{50}(48hr): 210 mg/L estimated</td>
</tr>
<tr>
<td>Fish</td>
<td></td>
<td>Fathead</td>
<td>LC_{50}(96hr): 230 mg/L estimated</td>
</tr>
</tbody>
</table>

*Estimates for product may be based on additional component data not shown

Persistence and degradability No data available.
Bioaccumulative potential No data available.
Mobility in soil Not available.
Other adverse effects No data available.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Do not release to the environment.
Local disposal regulations Dispose in accordance with all applicable regulations
Waste from residues/unused product Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. (See: Disposal instructions).
Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may contain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

<table>
<thead>
<tr>
<th>DOT</th>
<th>Value</th>
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<tbody>
<tr>
<td>UN number</td>
<td>UN1760</td>
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<tr>
<td>UN proper shipping name</td>
<td>Corrosive Liquids, n.o.s. (Contains: Sodium hydroxide)</td>
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<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>Class</td>
<td>8</td>
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<tr>
<td>Subsidiary risk</td>
<td>-</td>
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<tr>
<td>Packaging group</td>
<td>III</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS, and emergency procedures before handling.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</td>
<td>Not intended to be transported in bulk.</td>
</tr>
</tbody>
</table>

Material Name: Multi-Temp Dish Detergent
15. Regulatory information

US federal regulations
- SARA 302 Extremely hazardous substance
  Not listed.
- SARA 304 Emergency release notification
  Not listed.
- SARA 311/312 Hazard Categories
  Immediate Hazard - Yes
  Delayed Hazard – No
  Fire Hazard – No
  Pressure Hazard – No
  Reactivity Hazard – No
- SARA 313 (TRI reporting)
  Not listed.

16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Issue date</td>
<td>5/8/2015</td>
</tr>
<tr>
<td>Revision date</td>
<td>10/5/2016</td>
</tr>
<tr>
<td>Version #</td>
<td>2</td>
</tr>
<tr>
<td>HMIS® ratings</td>
<td>Health: 2</td>
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<tr>
<td></td>
<td>Flammability: 0</td>
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<tr>
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<td>Physical hazard: 0</td>
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<td>NFPA ratings</td>
<td>Health: 2</td>
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<td>Flammability: 0</td>
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<td></td>
<td>Instability: 0</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. 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 related 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 by the text.</td>
</tr>
<tr>
<td>Revision information</td>
<td>Hazard identification, composition/information on ingredients, physical chemical properties.</td>
</tr>
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