1. Product and Company Identification

Material name: ADDITIVE LC

METALWORKING FLUID ADDITIVE

Version #: 01

Issue date: 06-12-2014

CAS #: Mixture

Product use: METALWORKING FLUID ADDITIVE

Manufacturer

Company name: CIMCOOL® Industrial Products LLC

3000 Disney Street

Cincinnati, Ohio 45209

Telephone (General Information): 513-458-8199

Emergency telephone number: 1-800-424-9300 (CHEMTREC)

Emergency telephone number (outside USA): 1-703-527-3887 (CHEMTREC)

2. Hazards Identification

Emergency overview: Corrosive. Causes severe skin burns and eye damage. Causes serious eye damage. Toxic if swallowed. Causes damage to organs. Avoid prolonged contact with eyes, skin and clothing.

OSHA regulatory status: This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure: Inhalation. Ingestion. Skin contact. Eye contact.

Eyes: Causes eye burns. Risk of serious damage to eyes.

Skin: Causes skin burns. Do not get this material in contact with skin.

Inhalation: May cause respiratory irritation. Do not breathe dust/fume/gas/mist/vapors/spray. Prolonged inhalation may be harmful.

Ingestion: Toxic if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Do not ingest.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM HYDROXIDE</td>
<td>1310-73-2</td>
<td>40 - 60</td>
</tr>
<tr>
<td>POTASSIUM HYDROXIDE</td>
<td>1310-58-3</td>
<td>10 - 20</td>
</tr>
</tbody>
</table>

Other components below reportable levels 40 - 60

4. First Aid Measures

First aid procedures

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Skin contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. For severe burns, immediate medical attention is required.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Do not induce vomiting. Drink 1 or 2 glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

Notes to physician: Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

General advice: IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
5. Fire Fighting Measures

**Flammable properties**

The product is not flammable.

**Extinguishing media**

Suitable extinguishing media

Water fog, Foam. Dry chemicals. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Not applicable, non-combustible.

**Protection of firefighters**

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Protective equipment and precautions for firefighters

Wear suitable protective equipment.

**Fire fighting equipment/instructions**

Use standard firefighting procedures and consider the hazards of other involved materials. 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. In the event of fire and/or explosion do not breathe fumes. Move container from fire area if it can be done without risk.

**Hazardous combustion products**

Smoke, fumes, and oxides of carbon

**General fire hazards**

No unusual fire or explosion hazards noted.

6. Accidental Release Measures

**Personal precautions**

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination. Contact local authorities in case of spillage to drain/aquatic environment.

**Methods for containment**

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

**Methods for cleaning up**

Wear appropriate protective equipment and clothing during clean-up. This product is miscible in water.

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 product from entering drains. Following product recovery, flush area with water.

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

Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.

**Other information**

Clean up in accordance with all applicable regulations.

7. Handling and Storage

**Handling**

Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not breathe mist or vapor. Do not ingest. Do not get in eyes, on skin, on clothing. Use only in well-ventilated areas. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Wash contaminated clothing before reuse. Practice good housekeeping. Handle and open container with care. Do not empty into drains.

**Storage**

To maintain product quality, do not store in heat or direct sunlight. Use care in handling/storage. Keep container closed when not in use. Keep away from food, drink and animal feedingstuffs. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the MSDS). Store in a well-ventilated place. Room temperature - normal conditions. Do not allow material to freeze. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use.
8. Exposure Controls / Personal Protection

Occupational exposure limits

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM HYDROXIDE (CAS 1310-73-2)</td>
<td>Ceiling 2 mg/m3</td>
</tr>
<tr>
<td>POTASSIUM HYDROXIDE (CAS 1310-58-3)</td>
<td>Ceiling 2 mg/m3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM HYDROXIDE (CAS 1310-73-2)</td>
<td>PEL 2 mg/m3</td>
</tr>
</tbody>
</table>

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Engineering controls**

Ensure compliance with applicable exposure limits. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash fountain and emergency showers are recommended.

**Personal protective equipment**

**Eye / face protection**

Wear safety glasses with side shields (or goggles) and a face shield. Do not get in eyes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin protection**

Wear suitable protective clothing and eye/face protection.

**Respiratory protection**

Do not breathe dust/fume/gas/mist/vapors/spray. In case of insufficient ventilation, wear suitable respiratory equipment.

**General hygiene considerations**

When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. 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.

9. Physical & Chemical Properties

**Appearance**

CLEAR

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Not available.

**Odor**

CHEMICAL

**Odor threshold**

Not available.

**pH**

14.0

**Vapor pressure**

17.5 mm Hg @ 20 °C

**Vapor density**

0.6

**Boiling point**

> 270 °F (> 132.22 °C)

**Melting point/Freezing point**

< -27 °F (< -32.8 °C)

**Solubility (water)**

100 % Water Miscible

**Specific gravity**

1.52

**Relative density**

Not available.

**Flash point**

Not Applicable

**Flammability limits in air, upper, % by volume**

Not available.

**Flammability limits in air, lower, % by volume**

Not available.

**Auto-ignition temperature**

Not available.

**VOC**

0

**Bulk density**

12.66 lb/gal
10. Chemical Stability & Reactivity Information

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

**Conditions to avoid**
Contact with incompatible materials.

**Incompatible materials**
Strong acids. Oxidizing agents. Reacts violently with strong acids. Avoid contact with oxidizers or reducing agents.

**Hazardous decomposition products**
Smoke, fumes, and oxides of carbon

**Possibility of hazardous reactions**
No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

11. Toxicological Information

**Toxicological data**

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POTASSIUM HYDROXIDE (CAS 1310-58-3)</strong></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
</tr>
<tr>
<td><strong>SODIUM HYDROXIDE (CAS 1310-73-2)</strong></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Mouse</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
</tr>
</tbody>
</table>

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

**Acute effects**
Toxic if swallowed. Causes burns. Harmful in contact with skin. May be harmful if inhaled.

**Local effects**
Components of the product may be absorbed into the body through the skin. Toxic if swallowed. Harmful in contact with skin. Risk of serious damage to eyes. May cause irritation of respiratory tract.

**Chronic effects**
Prolonged exposure may cause chronic effects.

**Carcinogenicity**
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Not listed.

**Skin corrosion/irritation**
Causes severe skin burns and eye damage. Corrosive effects.

**Mutagenicity**
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Reproductive effects**
Not classified.

**Symptoms and target organs**
Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Burning pain and severe corrosive skin damage.

**Further information**
Symptoms may be delayed.

12. Ecological Information

**Ecotoxicological data**

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POTASSIUM HYDROXIDE (CAS 1310-58-3)</strong></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
</tr>
</tbody>
</table>
### Components Test Results

#### Species

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM HYDROXIDE (CAS 1310-73-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Ceriodaphnia dubia) 34.59 - 47.13 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Western mosquitofish (Gambusia affinis) 125 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

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

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### Ecotoxicity

Components of this product are hazardous to aquatic life.

### Environmental effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

### Persistence and degradability

Not available.

### Mobility in environmental media

This product is miscible in water.

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### 13. Disposal Considerations

#### Waste codes

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

#### Disposal instructions

Consult authorities before disposal. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Waste from residues / unused products

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 retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

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### 14. Transport Information

#### DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>Caustic alkali liquids, n.o.s. (SODIUM HYDROXIDE RQ = 2500 lbs and POTASSIUM HYDROXIDE RQ = 10000 lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>Class</td>
<td>8</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
</tbody>
</table>

#### Special precautions for user

Read safety instructions, MSDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

#### Special provisions

B2, IB2, T11, TP2, TP27

#### Packaging exceptions

154

#### Packaging non bulk

202

#### Packaging bulk

242

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### IATA

<table>
<thead>
<tr>
<th>UN number</th>
<th>Caustic alkali liquids, n.o.s. (SODIUM HYDROXIDE and POTASSIUM HYDROXIDE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>Class</td>
<td>8</td>
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<td>Label(s)</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
</tbody>
</table>

#### Environmental hazards

No.

#### Special precautions for user

Read safety instructions, MSDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

#### Other information

Passenger and cargo aircraft

Forbidden.

Cargo aircraft only

Forbidden.
IMDG

UN number: UN1719

UN proper shipping name: Caustic alkali liquids, n.o.s. (SODIUM HYDROXIDE and POTASSIUM HYDROXIDE)

Transport hazard class(es):
- Class: 8
- Subsidiary risk: -
- Label(s): 8
- Packing group: II

Environmental hazards: No.

Marine pollutant: Not available.

EmS: Not available.

Special precautions for user:
Read safety instructions, MSDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

DOT

IATA; IMDG

15. Regulatory Information

US federal regulations:
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. It may be reportable under the provisions of SARA Sections 311 and 312 if specific threshold criteria are met or exceeded.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.

DEA Exempt Chemical Mixtures Code Number
Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA (Superfund) reportable quantity
SODIUM HYDROXIDE: 1000
POTASSIUM HYDROXIDE: 1000

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories:
- Immediate Hazard - Yes
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No
Section 302 extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory or exempt (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>(PICCS)</td>
<td></td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

US - New Jersey RTK - Substances: Listed substance
- POTASSIUM HYDROXIDE (CAS 1310-58-3) Listed.
- SODIUM HYDROXIDE (CAS 1310-73-2) Listed.

US. Massachusetts RTK - Substance List
- POTASSIUM HYDROXIDE (CAS 1310-58-3)
- SODIUM HYDROXIDE (CAS 1310-73-2)

US. Pennsylvania RTK - Hazardous Substances
- POTASSIUM HYDROXIDE (CAS 1310-58-3) Listed.
- SODIUM HYDROXIDE (CAS 1310-73-2) Listed.

US. Rhode Island RTK
- POTASSIUM HYDROXIDE (CAS 1310-58-3)
- SODIUM HYDROXIDE (CAS 1310-73-2)

16. Other Information

Further information
HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 3
Flammability: 0
Physical hazard: 1

NFPA ratings
Health: 3
Flammability: 0
Instability: 1

Disclaimer
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.

This data sheet contains changes from the previous version in section(s):
This document has undergone significant changes and should be reviewed in its entirety.