SAFETY DATA SHEET (SDS)

TROY CORPORATION
8 Vreeland Road
Florham Park, NJ 07932
USA

FOR SDS INFORMATION:  1-973-589-2500 (USA)
CHEMTREC 1-703-527-3887 (USA)

TroyGuard™ BDX1
Product Code:  30207XPC

Effective Date: October 21, 2011
Replaces: October 10, 2011

1. PRODUCT & COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>TroyGuard™ BDX1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMICAL NAME</td>
<td>4,4-dimethyloxazolidine</td>
</tr>
<tr>
<td>CHEMICAL FAMILY</td>
<td>Amine</td>
</tr>
<tr>
<td>FORMULA</td>
<td>C5 H11 O N</td>
</tr>
<tr>
<td>SYNONYMS</td>
<td>None</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

TroyGuard™ BDX1 is a white to pale yellow clear liquid with an amine odor. Highly alkaline, pH=11. Combustible liquid. May cause severe eye irritation with irreversible corneal damage as well as respiratory irritation. Excessive heat will result in decomposition to ammonia and, at temperatures in excess of 140°C (284°F), to formaldehyde. This material is toxic to fish and wildlife.

OSHA REGULATORY STATUS

This material is classified as hazardous under OSHA regulations

POTENTIAL HEALTH EFFECTS

<table>
<thead>
<tr>
<th>ROUTES OF ENTRY</th>
<th>Ingestion, skin contact, eyes, inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUTE EFFECTS</td>
<td>Ingestion may cause gastrointestinal irritation, nausea, and vomiting.</td>
</tr>
<tr>
<td>SKIN</td>
<td>May cause slight skin irritation. This product is not a skin sensitizer.</td>
</tr>
<tr>
<td>EYE CONTACT</td>
<td>May cause severe eye irritation and irreversible corneal damage if not washed from eyes promptly.</td>
</tr>
<tr>
<td>INHALATION</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>CHRONIC EFFECTS</td>
<td>There are no known chronic effects.</td>
</tr>
<tr>
<td>TARGET ORGANS</td>
<td>None</td>
</tr>
<tr>
<td>CARCINOGENICITY</td>
<td>This product (or component) is not listed as a carcinogen according to OSHA, NTP, IARC, and ACGIH.</td>
</tr>
</tbody>
</table>

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

There are no known conditions aggravated by exposure to this product.

POTENTIAL ENVIRONMENTAL EFFECTS

This material is toxic to fish and wildlife.

See Section 12 for additional information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The listed components are considered to be hazardous based on OSHA’s Hazard Communication Standard. For further regulatory information, see Section 15.

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4-dimethyloxazolidine</td>
<td>51200-67-4</td>
<td>74</td>
</tr>
<tr>
<td>3,4,4-trimethyloxazolidine</td>
<td>75673-43-7</td>
<td>1-3</td>
</tr>
<tr>
<td>2-amino-2-methyl-1-propanol</td>
<td>124-68-5</td>
<td>0-2-2</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

INGESTION

Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

SKIN CONTACT

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

EYE CONTACT

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

INHALATION

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN

This product is highly alkaline, pH=10.8. Probable mucosal damage may contraindicate use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Combustible liquid - Class II

FIRE EXTINGUISHING MEDIA

Suitable extinguishing media - Dry chemical, carbon dioxide, water spray, or alcohol-resistant foam.

Unsuitable extinguishing media - Water jet

PROTECTION OF FIREFIGHTERS

Specific hazards arising from the chemical:

Thermal decomposition may release the following hazardous substances

Carbon monoxide, carbon dioxide, ammonia and formaldehyde.

Solvent vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by flames and ignition sources. Contact may cause burns to skin and eyes. Runoff to sewer may create fire or explosion hazard. Runoff from fire control or dilution water may cause pollution. Never use welding or cutting torch on or near drum (even empty) because product (even residue) can ignite explosively. Excessive heat in excess of 140°C (284°F) will result in decomposition to ammonia and formaldehyde.

Protective equipment and precautions for firefighters:

Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Avoid breathing vapors, keep upwind. Positive pressure self-contained breathing apparatus with full facemask and structural firefighters’ protective clothing will provide limited protection.

Page 1 of 3
6. ACCIDENTAL RELEASE MEASURES

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Wear protective equipment as specified in Section 8. Positive pressure self-contained breathing apparatus and structural firefighters’ protective clothing will provide limited protection. Shut off ignition sources; no flares, smoking, or flames in hazard area. Do not touch or walk through spilled material. Stop leak if you can do it without risk. For small spills, absorb with vermiculite or other noncombustible absorbent material and place into containers for later disposal. For large spills, dike far ahead of liquid spill for later disposal. If water pollution occurs, notify the appropriate authorities.

Observe all Federal, State, and Local regulations regarding notifications of accidental releases.

7. HANDLING & STORAGE

Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container tightly closed. Use only with adequate ventilation. “Empty” containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDIER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of. Store from incompatible substances in a cool, dry, ventilated area. Do not store at freezing temperatures or above 60°C (140°F) for extended periods. Avoid contact with brass, copper, or aluminum - will cause discoloration. Store in accordance with 29CFR1910.106. Substances with low electroconductivity, which may be ignited by electrostatic sparks, should be stored in containers which meet the bonding and grounding guidelines in NFPA77. Recommended Practice on Static Electricity. Do not contaminate water, food, or feed by storage or disposal. Plastic drums are non-conductive and, appropriate safety measures must be taken to prevent possible ignition when filling or dispensing flammable or combustible liquids. Storage and dispensing operations must comply with appropriate regulations (such as NFPA).

Observe all Federal, State, and Local regulations when storing or disposing of this substance.

8. PERSONAL PROTECTION/EXPOSURE CONTROLS

| EXPOSURE GUIDELINES          | None established                  |
| VENTILATION                  | Provide adequate ventilation or local exhaust to minimize exposure. |
| EYE/FACE PROTECTION          | If potential for contact with liquid exists, use splash-proof safety goggles and a face shield. |
| SKIN PROTECTION              | Direct contact may cause slight skin irritation. Wear impervious gloves and apron to prevent skin contact. |
| RESPIRATORY PROTECTION       | Whenever workplace conditions warrant the use of a respirator, a respiratory protection program meeting OSHA 1910.134 must be followed utilizing a NIOSH/MSHA-approved respirator. |
| OTHER                        | Eyewash and safety shower should be available within the immediate work area for emergency use. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| APPEARANCE                        | White to pale yellow clear |
| SPECIFIC GRAVITY AT 25°C (Water=1) | 0.96-0.99                  |
| ODOR                              | Amino odor                  |
| WATER SOLUBILITY                  | 100%                        |
| pH                                | 10.7-11.7                   |
| DECOMPOSITION TEMPERATURE         | Not determined              |
| MELTING/FREEZING POINT            | Not determined              |
| VISCOSITY (Gardner) AT 25°C        | A - A5                     |
| INITIAL BOILING POINT             | 101°C (214°F)               |
| VOLATILES BY WEIGHT               | % VOLATILES BY WEIGHT       | 100%                      |
| FLASH POINT (ASTM D3278-96)       | 43°C (110°F)                |
| VAPOR PRESSURE AT 20°C             | 22.9 mm Hg                  |
| (Setaflash Closed cup)            | 1                        |
| VAPOR DENSITY (Air=1)             | >1                         |
| EVAPORATION RATE (Butyl acetate=1)|                           |
| FLAMMABLE LIMITS                  | Not determined              |

10. STABILITY & REACTIVITY

| REACTIVITY                      | Stable under normal temperatures and pressures. |
| CONDITIONS TO AVOID             | Avoid heat or sources of ignition. |
| INCOMPATIBILITY                 | Avoid contact with strong acids, bases, and oxidizers. |
| HAZARDOUS DECOMPOSITION         | Decomposition may release carbon monoxide, carbon dioxide, ammonia, and formaldehyde. |
| HAZARDOUS POLYMERIZATION        | Hazardous polymerization does not occur. |

11. TOXICOLOGICAL INFORMATION

Toxicological data is included on 4,4-dimethyloxazolidine. For additional information, contact Troy Corporation:

**ACUTE ORAL EFFECTS**

LD50 (oral, rat-female) - 1037 mg/kg; LD50 (oral, rat-male) - 1308 mg/kg.

**ACUTE SKIN EFFECTS**

LD50 (oral, rat) - 2000 mg/kg. Slight irritation (rabbit).

This product is not considered to be a skin sensitizer according to results from the Buehler Sensitization Assay.

**ACUTE EYE EFFECTS**

Severe irritation and corrosive (rabbit). Corneal damage may be irreversible if not washed from eyes promptly.

**ACUTE INHALATION EFFECTS**

LC50 (rat,4 hr) - 1.1 mg/L.

**SUBCHRONIC EFFECTS AND OTHER STUDIES**

Subchronic dermal toxicity: In animal studies, no significant adverse effects were found.

Developmental toxicity: In animal studies, developmental toxicity was not demonstrated in any of the test results.

Mutagenicity: 4,4-dimethyloxazolidine was negative in most mutagenicity tests.

For additional information, contact Troy Corporation.

12. ECOLOGICAL INFORMATION

Ecotoxicological data is included on 4,4-dimethyloxazolidine. For additional information, contact Troy Corporation:

**ECOTOXICITY**

4,4-dimethyloxazolidine is toxic to fish and wildlife. Data is as follows:

- LC50 (rainbow trout, 96 hr flow-through) - 95 mg/L.
- LC50 (bluegill sunfish, 96 hr flow-through) - 59 mg/L. (based on 77.2% 4,4-dimethyloxazolidine).
- EC50 (daphnia magna, 48 hr) - 45 mg/L. (based on 77% 4,4-dimethyloxazolidine).
- LC50 (sheephead minnow, 96 hr flow-through) - 218 mg/L. (based on 82% 4,4-dimethyloxazolidine).
- LC50 (pink shrimp, 96 hr flow-through) - 230 mg/L. (based on 77% 4,4-dimethyloxazolidine).
- LC50 (eastern oyster, 96 hr flow-through) - 9.2 mg/L. (based on 82.5% 4,4-dimethyloxazolidine).
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24 HOUR EMERGENCY PHONE NUMBER
CHEMTREC 1-703-527-3887 (USA)

TroyGuard™ BDX1
Product Code: 30207XPC
Replacing: Replaces October 10, 2011
Effective Date: October 21, 2011

ENVIRONMENTAL FATE
4,4-dimethylloxazolidine rapidly degrades in water.
Octanol/water partition coefficient: LogPow = -0.73

13. DISPOSAL INFORMATION
RCRA HAZARDOUS WASTE
This product is a RCRA hazardous waste based on its flash point (<60°C) therefore meeting the characteristic of ignitability.

WASTE DISPOSAL PROCEDURE
The user of this material has the responsibility to dispose of unused material, residues, and containers in compliance with all Federal, State, and Local Regulations

14. TRANSPORTATION INFORMATION
DOT
SHIPPING NAME: UN1993, Flammable liquids, n.o.s. (contains: 4,4-dimethylloxazolidine), 3, PG III, ERG# 128
LABELS REQUIRED: Flammable liquid

IATA
SHIPPING NAME: UN1993, Flammable liquids, n.o.s. (contains: 4,4-dimethylloxazolidine), 3, PG III, ERG# 3L
LABELS REQUIRED: Flammable liquid

IMDG
SHIPPING NAME: UN1993, Flammable liquids, n.o.s. (contains: 4,4-dimethylloxazolidine), 3, PG III, FP 43°C (110°F), EMS# F-E, S-E
LABELS REQUIRED: Flammable liquid

15. REGULATORY INFORMATION
CERCLA SECTION 103 (40CFR302.4)
This product does not contain any chemicals that are reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

SARA SECTION 302 (40CFR355.30), SARA SECTION 304 (40CFR355.40)
This product does not contain any chemicals that require emergency planning based on Threshold Planning Quantities (TPQ) or release reporting based on Reportable Quantities (RQ).

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21)

<table>
<thead>
<tr>
<th>ACUTE</th>
<th>CHRONIC</th>
<th>FIRE</th>
<th>REACTIVE</th>
<th>PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

SARA SECTION 313 (40CFR372.65)
This product does not contain any chemicals subject to the reporting requirements of the Emergency Planning and Community Right-to-Know Act of 1986.

CHEMICAL INVENTORIES
The ingredients of this product are all on the following Chemical Substance Inventories, are exempt from the Inventories, or are otherwise compliant with inventory requirements of the governing agency.

<table>
<thead>
<tr>
<th>TSCA</th>
<th>EINECS</th>
<th>DSL</th>
<th>AICS</th>
<th>ECL</th>
<th>MITI ENCS</th>
<th>PICCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IECSC</th>
<th>NZIoC</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>China</td>
<td>New Zealand</td>
</tr>
</tbody>
</table>

CALIFORNIA PROPOSITION 65
This product does not contain any substances that are currently on the list of Known Carcinogens and Reproductive Toxins, at levels which would require a warning under the statute.

STATE RIGHT-TO-KNOW
For additional information on components that require listing for compliance with State Right-to-Know regulations, contact Troy Corporation.

16. OTHER

REVISIONS
Prepared by: Environmental and Regulatory Affairs Dept.
This SDS has been revised in the following sections: (revisions indicated in left border)
Sec. 2 (Emergency Overview)

ABBREVIATIONS
PNOC - Particulates not otherwise classified
STEOL - Short-term exposure limit
PNOR - Particulates not otherwise regulated
TLV - Threshold limit value
TWA - Time-weighted average

HMIS RATING | NFPA RATING
--- | ---
HEALTH | FLAMMABILITY | REACTIVITY | PERSONAL PROTECTION | HEALTH | FLAMMABILITY | REACTIVITY
3 | 2 | 0 | H | 3 | 2 | 0

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