## SECTION 1: PRODUCT IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>DIMETHYLAMINOETHANOL BITARTRATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT CODE</td>
<td>2342</td>
</tr>
<tr>
<td>SUPPLIER</td>
<td>MEDISCA Inc.</td>
</tr>
<tr>
<td></td>
<td>Tel.: 1.800.932.1039</td>
</tr>
<tr>
<td></td>
<td>661 Route 3, Unit C, Plattsburgh, NY, 12901</td>
</tr>
<tr>
<td></td>
<td>3955 W. Mesa Vista Ave., Unit A-10, Las Vegas, NV, 89118</td>
</tr>
<tr>
<td></td>
<td>6641 N. Belt Line Road, Suite 130, Irving, TX, 75063</td>
</tr>
<tr>
<td></td>
<td>MEDISCA Pharmaceutique Inc.</td>
</tr>
<tr>
<td></td>
<td>Tel.: 1.800.665.6334</td>
</tr>
<tr>
<td></td>
<td>4509 Rue Dobrin, St. Laurent, QC, H4R 2L8</td>
</tr>
<tr>
<td></td>
<td>21300 Gordon Way, Unit 153/158, Richmond, BC V6W 1M2</td>
</tr>
<tr>
<td></td>
<td>MEDISCA Australia PTY LTD</td>
</tr>
<tr>
<td></td>
<td>Tel.: 1.300.786.392</td>
</tr>
<tr>
<td></td>
<td>Unit 7, Heritage Business Park</td>
</tr>
<tr>
<td></td>
<td>5-9 Ricketty Street, Mascot, NSW 2020</td>
</tr>
<tr>
<td>EMERGENCY PHONE</td>
<td>CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300</td>
</tr>
<tr>
<td></td>
<td>NSW Poisons Information Centre: 131 126</td>
</tr>
<tr>
<td>USES</td>
<td>Stimulant, anorectic agent</td>
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</table>

## SECTION 2: HAZARDS IDENTIFICATION

### GHS CLASSIFICATION
Acute Toxicity - Oral (Category 5)
Acute Aquatic Toxicity (Category 3)

### PICTOGRAM
Not Applicable

### SIGNAL WORD
Not applicable

### HAZARD STATEMENT(S)
May be harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
Harmful to aquatic life.

### AUSTRALIA-ONLY HAZARDS
Repeated exposure may cause skin dryness or cracking.

### PRECAUTIONARY STATEMENT(S)

#### Prevention
Avoid release to the environment.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection, face protection.

#### Response
IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.

### Storage
Not applicable

### Disposal
Dispose of contents and/or container in accordance with local regulations.

### HMIS CLASSIFICATION
<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>E</td>
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>(2-hydroxyethyl)dimethylammonium hydrogen tartrate</th>
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<tr>
<td>BOTANICAL NAME</td>
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</tr>
<tr>
<td>SYNONYM</td>
<td>DMAE bitartrate ; Deanol tartrate</td>
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<tr>
<td>CHEMICAL FORMULA</td>
<td>C₈H₁₇NO₇</td>
</tr>
<tr>
<td>CAS NUMBER</td>
<td>5988-51-2</td>
</tr>
<tr>
<td>ALTERNATE CAS NUMBER</td>
<td></td>
</tr>
<tr>
<td>MOLECULAR WEIGHT</td>
<td>239.2223</td>
</tr>
<tr>
<td>% BY WEIGHT</td>
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</table>

COMPOSITION

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as health hazards and hence require reporting in this section.

NOTES

Chemical Class: Carboxylic Acid Salt
Precursor of choline

SECTION 4: FIRST-AID MEASURES

IN CASE OF EYE CONTACT
Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.

IN CASE OF SKIN CONTACT
Wash with soap & water for 15 minutes. If irritation persists seek medical aid.

IF SWALLOWED
Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.

IF INHALED
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SYMPTOMS AND EFFECTS
Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 5: FIREFIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL
Not applicable

FLAMMABLE PROPERTIES
May be combustible at high temperature

HAZARDOUS COMBUSTION PRODUCTS
Under fire conditions, hazardous fumes will be present.

EXTINGUISHING MEDIA
Small fire: dry chemical, CO₂ or water spray. Large fire: dry chemical, CO₂, alcohol resistant foam or water spray. Do not get water inside containers.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
METHODS & MATERIAL FOR CONTAINMENT

On land, sweep or shovel into suitable containers. Minimize generation of dust.

CLEANUP PROCEDURE

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition. Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

STORAGE CONDITIONS

Store in original container, tightly sealed container, protected from direct sunlight, in a dry, and well-ventilated area, away from incompatible materials. Store in accordance with local regulations. Eliminate all ignition sources. Separate from oxidizing materials. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Preserve in tight containers.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Chemical Name: DIMETHYLAMINOETHANOL BITARTRATE CAS #: 5988-51-2

| OSHA PEL | N/L | N/L | - | - | - | - |
| ACGIH TLV | N/L | N/L | N/L | - | - | - |
| NIOSH | N/L | N/L | N/L | N/L | N/L | - |
| AIHA WEEL | N/L | N/L | N/L | - | - | - |
| Safe Work Australia HSIS | N/L | N/L | N/L | - | - | - |
| HSE | N/L | N/L | N/L | - | - | - |

N/L = Not Listed

EXPOSURE GUIDELINES

Consult local authorities for provincial or state exposure limits. Particulates not otherwise regulated, respirable fraction: 5 mg/m³

PERSONAL PROTECTIVE EQUIPMENT

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to minimize contact with skin. **Respirators:** Follow WHMIS or OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SPECIFIC ENGINEERING CONTROLS

Adequate mechanical ventilation. Fumehood, eye wash station, and safety shower.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE**

Solid

**DESCRIPTION**

White or off-white crystalline powder.

**SOLUBILITY**

Soluble in water and ethanol.

**ODOR**

Not available

Last Revision: 02/2017

DIMETHYLAMINOETHANOL BITARTRATE

Page 3 of 7
SAFETY DATA SHEET

FLAMMABILITY
May be combustible at high temperature

ODOR THRESHOLD
Not available

PH
3.0 - 4.0

MELTING POINT
(110 - 120)°C, (230 - 248)°F

BOILING POINT
Not available

FREEZING POINT
Not available

FLASH POINT
Not available

SPECIFIC GRAVITY
Not available

EVAPORATION RATE
Not available

EXPLOSIVE LIMIT
Not available

UPPER FLAMMABLE/EXPLOSIVE LIMIT(S)
Not available

LOWER FLAMMABLE/EXPLOSIVE LIMIT(S)
Not available

VAPOR PRESSURE
Not available

VAPOR DENSITY
(AIR = 1)
Not available

RELATIVE DENSITY
(WATER = 1)
Not available

log P
(OCTANOL-WATER)
Not available

AUTO-IGNITION TEMPERATURE
Not available

DECOMPOSITION TEMPERATURE
Not available

VISCOSITY
Not available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY
Not established

STABILITY
Stable under recommended storage conditions

MATERIALS TO AVOID
Strong oxidants, acids, bases

HAZARDOUS DECOMPOSITION PRODUCTS
Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and other gases may occur

HAZARDOUS POLYMERIZATION
Will not occur

POSSIBILITY OF HAZARDOUS REACTION
Not established

CONDITIONS TO AVOID
Moisture, sunlight and extreme temperatures

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY
Oral: Rat: LD50: (mg/kg): 2600
Dermal: Rabbit LD50: (mg/kg): Not available
Inhalation: Rat: LD50: (mg/L/4hr): Not available

SKIN CORROSION/IRRITATION
Based on available data, the classification criteria are not met.
Causes skin irritation

SERIOUS EYE DAMAGE/EYE IRITATION
Based on available data, the classification criteria are not met.
Causes serious eye irritation

RESPIRATORY OR SKIN SENSITIZATION
Respiratory sensitization: Due to lack of data the classification is not possible.
Skin sensitization: Due to lack of data the classification is not possible.

GERM CELL MUTAGENICITY
Due to lack of data the classification is not possible.

CARCINOGENICITY
OSHA
DIMETHYLAMINOETHANOL BITARTRATE is not listed.
NTP
DIMETHYLAMINOETHANOL BITARTRATE is not listed.
**SAFETY DATA SHEET**

**DIMETHYLAMINOETHANOL BITARTRATE** is not evaluated.

**IARC**

California Proposition 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**ADDITIONAL CARCINOGENICITY INFORMATION**

Based on available data, the classification criteria are not met.

Suspected carcinogen: CAESAR Carcinogenicity model in VEGA (Q)SAR platform predicts that the chemical is Carcinogen (moderate reliability)

**REPRODUCTIVE TOXICITY**

Due to lack of data the classification is not possible.

**SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE**

Due to lack of data the classification is not possible.

**SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE**

Due to lack of data the classification is not possible.

**ASPIRATION HAZARDS**

Not expected to present a significant hazard under anticipated conditions of normal use.

**SIGNS AND SYMPTOMS OF EXPOSURE**

May be harmful if inhaled. May cause respiratory tract irritation. Inhalation

May be harmful if swallowed. Ingestion

Causes skin irritation. Skin

Causes serious eye irritation. Eyes

**SECTION 12: ECOLOGICAL INFORMATION**

**TOXICITY**

EC50: 48 Hr: Crustacea: (Daphnia Magna) (mg/L): 14.31*

LC50: 96 Hr: Fish: (mg/L): Not available

IC50: 72 Hr: Algae: (mg/L): Not available

**PERSISTENCE AND DEGRADABILITY**

Not available

**BIOACCUMULATIVE POTENTIAL**

Not available

**MOBILITY IN SOIL**

Soluble in water

**OTHER ADVERSE EFFECTS**

This product is not intended to be released into the environment

**NOTES**

*Suspected hazardous to the aquatic environment: DEMETRA Daphnia Magna toxicity model in VEGA (Q)SAR platform prediction (good reliability)

**SECTION 13: DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL**

Dispose of in accordance with federal / local laws and regulations. Avoid release into the environment.

**SECTION 14: TRANSPORT INFORMATION**

**UNITED STATES & CANADA**

**UN PROPER SHIPPING NAME**

Not dangerous good

**UN NUMBER**

Not applicable

**CLASS**

Not applicable

**PACKING GROUP**

Not applicable
SAFETY DATA SHEET

AUSTRALIA

UN PROPER SHIPPING NAME
Not dangerous good
UN NUMBER
Not applicable
CLASS
Not applicable
PACKING GROUP
Not applicable
HAZCHEM
Not Applicable

ENVIRONMENTAL HAZARDS
Not available

SPECIAL SHIPPING INFORMATION
Not applicable

SECTION 15: REGULATORY INFORMATION

<table>
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<th>Chemical Name &amp; CAS</th>
<th>CERCLA 40 CFR Part 302.4</th>
<th>SARA (Title III) 40 CFR Part 372.65 Appendix A</th>
<th>EPA 40 CFR Part 355 Appendix A</th>
<th>Pennsylvania</th>
<th>Right-to-know</th>
<th>Massachusetts</th>
<th>California Prop 65</th>
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N/L = Not Listed; X = Listed

AUSTRALIAN REGULATIONS

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<thead>
<tr>
<th>Chemical Name &amp; CAS</th>
<th>Poisons and Therapeutic Goods Regulation</th>
<th>Therapeutic Goods Act</th>
<th>Code of Practices - Illicit Drug Precursors</th>
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<tr>
<td>DIMETHYLAMINOETHANOL BITARTRATE 5988-51-2</td>
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<td>N/L</td>
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SECTION 16: OTHER INFORMATION

REFERENCES
Available upon request

ABBREVIATIONS AND ACRONYMS
CAS – Chemical Abstract Service; GHS – Global Harmonized System; OSHA PEL – Occupational Safety & Health Administration Permissible Exposure Limits; TWA – Time Weighted Average; HSIS – Hazardous Substances Information System; STEL – Short Term Exposure Limit; AIHA WEEL – American Industrial Hygiene Association Workplace Environment Exposure Levels; LD50 – Lethal Dose, 50%; IARC – International Agency for Research on Cancer; NTP – National Toxicology Program; WHMIS – Workplace Hazardous Materials Information System; SARA – Superfund Amendments and Reauthorization Act; EPA – Environmental Protection Agency; CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act; HMIS – Hazardous Materials Information System; NIOSH – National Institute for Occupational Safety and Health; MSHA - Mine Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; IDHL - Immediately Dangerous to Health or Life; TLV – Threshold Limit Value; HSE – Health and Safety Executive; REL - Recommended Exposure Limit

LAST REVISION
02/2017

SUPERSEDES
07/2014
This document was created in accordance with OSHA, Safe Work Australia and WHMIS regulations. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDISCA® shall not be held liable for any damage resulting from handling or from contact with the above product. Recipients of the product must take responsibility for observing existing laws and regulations.