SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME  MENTHOL (L), USP (Crystals) (Natural)
PRODUCT CODE  0521
SUPPLIER  MEDISCA Inc.
           Tel.: 1.800.932.1039 | Fax.: 1.855.850.5855
           661 Route 3, Unit C, Plattsburgh, NY, 12901
           3955 W. Mesa Vista Ave., Unit A-10, Las Vegas, NV, 89118
           6641 N. Belt Line Road, Suite 130, Irving, TX, 75063
MEDISCA Pharmaceutique Inc.
           Tel.: 1.800.665.6334 | Fax.: 514.338.1693
           4509 Rue Dobrin, St. Laurent, QC, H4R 2L8
           21300 Gordon Way, Unit 153/158, Richmond, BC V6W 1M2
MEDISCA Australia PTY LTD
           Tel.: 1.300.786.392 | Fax.: 61.2.9700.9047
           Unit 7, Heritage Business Park
           5-9 Ricketty Street, Mascot, NSW 2020

EMERGENCY PHONE  CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
                  NSW Poisons Information Centre: 131 126

USES  Pharmaceutical agent

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION  Eye Irritation (Category 2A)
                      Skin Irritation (Category 2)
                      Specific Target Organ Toxicity - Single Exposure (Category 3) - (respiratory)
                      Acute Aquatic Toxicity (Category 3)

PICTOGRAM

SIGNAL WORD  Warning

HAZARD STATEMENT(S)  Harmful to aquatic life.
                      Causes serious eye irritation.
                      Causes skin irritation.
                      May cause respiratory irritation.

AUSTRALIA-ONLY HAZARDS  Not Applicable.

PRECAUTIONARY STATEMENT(S)

Prevention  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.
            Avoid release to the environment.

Response  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 ON SKIN (HAIR): Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
           IF EXPOSED OR CONCERNED: Get medical advice/attention.

Storage  Store locked up.

Disposal  Dispose of contents/container in accordance with local regulation.
SAFETY DATA SHEET

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME: Cyclohexanol, 5-methyl-2-(1-methylethyl)-

BOTANICAL NAME: Not applicable

SYNONYM: levo-Menthol; (-)-Menthol

CHEMICAL FORMULA: C₁₀H₂₀O

CAS NUMBER: 1490-04-6 (general)

ALTERNATE CAS NUMBER: 2216-51-5 (L-form)

MOLECULAR WEIGHT: 156.267

COMPOSITION:

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENTHOL (L)</td>
<td>1490-04-6</td>
<td>100</td>
</tr>
</tbody>
</table>

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 family: Cyclohexane derivative.

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:
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:
Flammable. Combustible.

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

Last Revision: 07/2017

MENTHOL (L), USP (Crystals) (Natural)
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
Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

PRECAUTIONS FOR SAFE HANDLING
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. Controlled room temperature indicates a temperature 20° to 25°C (68° to 77°F); that results in a mean kinetic temperature calculated to be not more than 25°C; and that allows for excursions between 15° and 30°C (59° and 86°F) that are experienced in pharmacies, hospitals, and warehouses. Provided the mean kinetic temperature remains in the allowed range, transient spikes up to 40°C (104°F) are permitted as long as they do not exceed 24 hours. Preserve in tight containers, preferably at controlled room temperature.

STORAGE CONDITIONS

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION
Chemical Name: MENTHOL (L)   CAS #: 1490-04-6

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>Ceiling</th>
<th>STEL</th>
<th>REL</th>
<th>IDLH</th>
<th>Remarks</th>
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<tbody>
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<td>OSHA PEL</td>
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<tr>
<td>ACGIH TLV</td>
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<td>N/L</td>
<td>N/L</td>
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<tr>
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<tr>
<td>AIHA WEEL</td>
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<td>N/L</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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
- Colorless, hexagonal crystals, usually needle-like, or in fused masses, or crystalline powder. Has a pleasant, peppermint-like odor.

### SOLUBILITY
- Slightly soluble in water; very soluble in alcohol, in chloroform, in ether, and in solvent hexane; freely soluble in glacial acetic acid, in mineral oil, and in fixed and volatile oils.

### ODOR
- Pleasant peppermint-like odor

### FLAMMABILITY
- Flammable. Combustible.

### ODOR THRESHOLD
- Not available

### pH
- Not available

### MELTING POINT
- (41-44)°C, (105.8-111.2)°F

### BOILING POINT
- (212-216.4)°C, (413.6-421.5)°F

### FREEZING POINT
- (41-44)°C, (105.8-111.2)°F

### SPECIFIC GRAVITY
- 0.89

### EVAPORATION RATE
- 0 % volatile

### EXPLOSIVE LIMIT
- Not available

### VAPOR PRESSURE
- 0.008492 kPa (25°C)

### RELATIVE DENSITY
- (WATER = 1) Not available

### DECOMPOSITION TEMPERATURE
- Not available

### SECTION 10: STABILITY AND REACTIVITY

#### REACTIVITY
- Not established

#### STABILITY
- Stable under recommended storage conditions

#### MATERIALS TO AVOID
- Strong oxidants, acids and 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): 3300
- Dermal: Rabbit LD50: (mg/kg): > 5000
- Inhalation: Rat: LD50: (mg/L/4hr): Not available

#### SKIN CORROSION/IRRITATION
- Causes skin irritation.
- Irritancy test; Result: Irritant.; Species: Rabbit; Organ: Skin.; Severity: Moderate.

#### SERIOUS EYE DAMAGE/EYE IRRITATION
- Causes serious eye irritation.
- Irritancy test: Result: Irritant; Species: Rabbit; Organ: Eye; Severity: Slight.
SAFETY DATA SHEET

RESPIRATORY OR SKIN SENSITIZATION
Respiratory sensitization: Due to lack of data the classification is not possible.
Skin sensitization: Based on available data, the classification criteria are not met. May give rise to hypersensitivity reactions including contact dermatitis. Repeated contact may cause Allergic dermatitis.

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

CARCINOGENICITY

<table>
<thead>
<tr>
<th>OSHA</th>
<th>MENTHOL (L) is not listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP</td>
<td>MENTHOL (L) is not listed.</td>
</tr>
<tr>
<td>IARC</td>
<td>MENTHOL (L) is not evaluated.</td>
</tr>
<tr>
<td>California Proposition 65</td>
<td>This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.</td>
</tr>
</tbody>
</table>

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

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

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE
May cause respiratory irritation.

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE
Based on available data, the classification criteria are not met.

ASPIRATION HAZARDS
Not available

SIGNS AND SYMPTOMS OF EXPOSURE
Symptoms related to the physical, chemical, and toxicological characteristics:
Delayed and immediate effects of exposure:
Coma.
Medical conditions aggravated by exposure:
Pre-existing skin conditions or damage. Eye disorders. Respiratory impairment.

POTENTIAL HEALTH EFFECTS

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>May be harmful if inhaled. May cause respiratory tract irritation. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of significant quantities of menthol is reported to cause symptoms similar to those seen after ingestion of camphor, including severe abdominal pain, nausea, vomiting, vertigo, ataxia, drowsiness, and coma.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. Causes skin irritation. Repeated contact may cause Allergic dermatitis.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY
EC50: 48 Hr: Crustacea: (mg/L): Not available
LC50: 96 Hr: Fish: Pimephales promelas: (mg/L): 18.9
IC50: 72 Hr: Algae: (mg/L): Not available

PERSISTENCE AND DEGRADABILITY
Not available

BIOACCUMULATIVE POTENTIAL
LogPow: 3.380

MOBILITY IN SOIL
Water Solubility: 420 mg/L (25°C)

OTHER ADVERSE EFFECTS
This product is not intended to be released into the environment

SECTION 13: DISPOSAL CONSIDERATIONS
**SAFE DATA SHEET**

**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

**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 applicable

**SPECIAL SHIPPING INFORMATION**

Not applicable

**SECTION 15: REGULATORY INFORMATION**

<table>
<thead>
<tr>
<th>Chemical Name &amp; CAS</th>
<th>CERCLA 40 CFR Part 302.4</th>
<th>SARA (Title III) 40 CFR Part 372.65</th>
<th>EPA 40 CFR Part 355 Appendix A</th>
<th>Appendix B</th>
<th>Pennsylvania</th>
<th>Right-to-know New Jersey</th>
<th>Massachusetts</th>
<th>California Prop 65</th>
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<td>MENTHOL 1490-04-6</td>
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<td>N/L</td>
<td>N/L</td>
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<td>N/L</td>
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</tr>
</tbody>
</table>

N/L = Not Listed; X = Listed

**AUSTRALIAN REGULATIONS**

<table>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>MENTHOL 1490-04-6</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
</tr>
</tbody>
</table>

**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
07/2017

SUPERSEDES
07/2014

DISCLAIMER

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.