1. IDENTIFICATION

Product Identifier
Product Name COLLODION II

Other means of identification
SDS # MDHVCOLII, MDCOL II
UN/ID No UN2059

Recommended use of the chemical and restrictions on use
Recommended Use Medical skin coating.

Details of the supplier of the safety data sheet
Supplier Address Mavidon Medical Products
1820 2nd Avenue North
Lake Worth, FL 33461 USA

Emergency Telephone Number
Company Phone Number 561-585-2227
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Very viscous amber liquid
Physical State Liquid
Odor Ester Sweet clear

Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Signal Word
Danger

Hazard Statements
Causes serious eye irritation
May cause drowsiness or dizziness
Highly flammable liquid and vapor
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - 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 (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
See Section 4 for additional first aid information
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IN CASE OF FIRE: Use CO2, dry chemical, or alcohol resistant foam to extinguish.

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>141-78-6</td>
<td>85-95</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>3-7</td>
</tr>
<tr>
<td>Cellulose nitrate</td>
<td>9004-70-0</td>
<td>5-10</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Use Collodion Remover or acetone to remove Collodion residue. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion
If conscious give 2 glasses of water to dilute. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.
Most important symptoms and effects

Symptoms
Causes serious eye irritation. Direct contact with skin can cause irritation or redness. Mist or vapor inhalation can cause irritation to the nose, throat, and upper respiratory tract. May cause drowsiness or dizziness. May cause nausea, vomiting, stomach ache, and diarrhea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide (CO2). Dry chemical. Alcohol resistant foam. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Highly flammable liquid and vapor. Closed containers may explode due to buildup of pressure when exposed to extreme heat. Vapors may travel to source of ignition and flash back. Vapors may cause flash fire.

Hazardous Combustion Products
Products of combustion include compounds of carbon, hydrogen, and oxygen, including carbon monoxide. Acrid smoke and fumes emitted if heated to decomposition.

Sensitivity to Static Discharge
Take precautionary measures against static discharge.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Use personal protective equipment as required. Evacuate personnel to safe areas. Ventilate affected area.

Environmental Precautions
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS. For spills in excess of allowable limits (RQ) notify the National Response Center (800) 424-8802; refer to SARA Title III, Section 313 40 CFR 372, and CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

Methods and material for containment and cleaning up

Methods for Containment
Contain with dirt or material which is nonreactive and non-flammable. Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
Absorb spillage with non-combustible, absorbent material. Sweep up and shovel into suitable containers for disposal. Take precautionary measures against static discharges.
7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Avoid breathing vapors or mists. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Ground/bond container and receiving equipment. Use non-sparking hand tools and explosion-proof electrical equipment. Take precautionary measures against static discharges. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Protect container from physical damage.

Incompatible Materials

Strong oxidizers. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>TWA: 400 ppm</td>
<td>TWA: 400 ppm; TWA: 1400 mg/m³ (vacated) TWA: 400 ppm; TWA: 1400 mg/m³ (vacated)</td>
<td>IDLH: 2000 ppm; TWA: 400 ppm; TWA: 1400 mg/m³</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>STEL: 400 ppm, TWA: 200 ppm</td>
<td>TWA: 400 ppm; TWA: 980 mg/m³ (vacated) TWA: 400 ppm; TWA: 980 mg/m³ (vacated) STEL: 500 ppm; STEL: 1225 mg/m³</td>
<td>IDLH: 2000 ppm; TWA: 400 ppm; TWA: 980 mg/m³ STEL: 500 ppm; STEL: 1225 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical anti-splash safety goggles. Eye protection must be provided in accordance with OSHA regulations (29 CFR 1910.133), ANSI Z87.1, or European Standard EN 166, as applicable.

Skin and Body Protection

Neoprene or rubber gloves with cuffs. Suitable protective clothing.

Respiratory Protection

None required; however, if misting occurs, NIOSH approved respirator capable of removing particulate from air must be worn. Respiratory protection must be provided in accordance with OSHA regulations (29 CFR 1910.134) or European Standard EN 149, as applicable. Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Very viscous amber liquid clear</td>
<td>Odor Ester Sweet</td>
<td>Odor Threshold Not determined</td>
</tr>
<tr>
<td>Color</td>
<td>Amber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>77.8 °C / 172.6 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>-4.4 °C / 24 °F</td>
<td></td>
<td>Tag Closed Cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>&lt; 1</td>
<td></td>
<td>(Water = 1)</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>12.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>2.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>76 mmHg</td>
<td>@ 20 C</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&gt;1</td>
<td></td>
<td>(Air=1)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.958</td>
<td></td>
<td>(1=Water)</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Slightly soluble</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Extreme high temperatures, sparks and open flames.

Incompatible Materials
Strong oxidizers. Strong acids.

Hazardous Decomposition Products
Decomposition will not occur if handled and stored properly. In case of fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

**Product Information**

**Eye Contact**
Causes serious eye irritation.

**Skin Contact**
Avoid contact with skin.

**Inhalation**
Avoid breathing vapors or mists.

**Ingestion**
Do not taste or swallow.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>5620 mg/kg (Rat)</td>
<td>&gt; 20 mL/kg (Rabbit) &gt; 18000 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>4396 mg/kg (Rat)</td>
<td>12800 mg/kg (Rat) = 12870 mg/kg (Rabbit)</td>
<td>= 72.6 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Cellulose nitrate</td>
<td>&gt; 5 g/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on physical, chemical and toxicological effects

**Symptoms**
Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity**
The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested. Cellulose nitrate is considered an IARC 2A carcinogen when used in manufacturing of some paints. Group 3 IARC components are "not classifiable as human carcinogens".

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td></td>
<td>Group 3</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>67-63-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose nitrate</td>
<td></td>
<td>Group 2A</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>9004-70-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STOT - single exposure**
May cause drowsiness or diziness.

**Numerical measures of toxicity**
Not determined

12. ECOLOGICAL INFORMATION

**Ecotoxicity**
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate 141-78-6</td>
<td>3300: 48 h Desmodesmus subspicatus mg/L EC50</td>
<td>220 - 250: 96 h Pimephales promelas mg/L LC50 flow-through 484: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 352 - 500: 96 h Oncorhynchus mykiss mg/L LC50 semi-static</td>
<td>EC50 = 1180 mg/L 5 min  EC50 = 1500 mg/L 15 min  EC50 = 5870 mg/L 15 min  EC50 = 7400 mg/L 2 h</td>
<td>560: 48 h Daphnia magna mg/L EC50 Static</td>
</tr>
<tr>
<td>Isopropyl Alcohol 67-63-0</td>
<td>1000: 96 h Desmodesmus subspicatus mg/L EC50  1000: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>9640: 48 h Daphnia magna mg/L EC50 Static</td>
<td>13299: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate 141-78-6</td>
<td>0.8</td>
</tr>
<tr>
<td>Isopropyl Alcohol 67-63-0</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate 141-78-6</td>
<td>Included in waste stream: F039</td>
<td></td>
<td></td>
<td>U112</td>
</tr>
</tbody>
</table>

California Hazardous Waste Status
This product contains one or more substances that are listed with the State of California as a hazardous waste

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate 141-78-6</td>
<td>Toxic Ignitable</td>
</tr>
<tr>
<td>Isopropyl Alcohol 67-63-0</td>
<td>Toxic Ignitable</td>
</tr>
<tr>
<td>Cellulose nitrate 9004-70-0</td>
<td>Ignitable Reactive</td>
</tr>
</tbody>
</table>
14. TRANSPORT INFORMATION

**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances. Based on package size, product may be eligible for limited quantity exception.

**DOT**

- **UN/ID No**: UN2059
- **Proper Shipping Name**: Nitrocellulose, solution, flammable
- **Hazard Class**: 3
- **Packing Group**: II

**IATA**

- **UN/ID No**: UN2059
- **Proper Shipping Name**: Nitrocellulose, solution, flammable
- **Hazard Class**: 3
- **Packing Group**: II

**IMDG**

- **UN/ID No**: UN2059
- **Proper Shipping Name**: Nitrocellulose, solution, flammable
- **Hazard Class**: 3
- **Packing Group**: II

15. REGULATORY INFORMATION

**International Inventories**

- **TSCA**: All ingredients are listed or exempt from listing on Chemical Substance Inventory
- **DSL**: Listed
- **NDSL**: Listed
- **EINECS**: Listed

*Legend:*

- **TSCA**: United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL**: Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS**: European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS**: Japan Existing and New Chemical Substances
- **IECSC**: China Inventory of Existing Chemical Substances
- **KECL**: Korean Existing and Evaluated Chemical Substances
- **PICCS**: Philippines Inventory of Chemicals and Chemical Substances

**US Federal Regulations**

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td></td>
<td>141-78-6</td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazard Categories**

- **Acute Health Hazard**: Yes
- **Chronic Health Hazard**: No
- **Fire Hazard**: Yes
- **Sudden Release of Pressure Hazard**: No
- **Reactive Hazard**: No
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol - 67-63-0</td>
<td>67-63-0</td>
<td>3-7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>141-78-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>67-63-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose nitrate</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>9004-70-0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Hazards</td>
<td>Flammability</td>
<td>Physical Hazards</td>
<td>Personal Protection</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Issue Date: 03-Mar-2006
Revision Date: 16-Jan-2014
Revision Note: New format

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.

End of Safety Data Sheet