Safety Data Sheet

Issue Date: 16-Jan-2014 **Revision Date:** 8-Jan-2018 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name COLLODION

Other means of identification
SDS # MD0002, MD0014

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
6625 White Dr
Riviera Beach, FL 33407

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

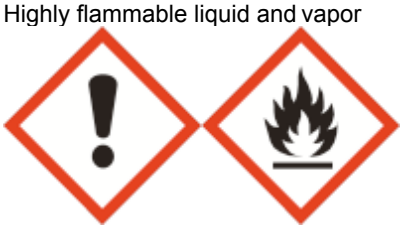
Appearance Very viscous amber liquid clear **Physical State** Liquid **Odor** Ether

Classification

Acute toxicity - Oral	Category 4
Specific target organ toxicity (single exposure)	Category 3
Flammable Liquids	Category 2

Signal Word
Danger

Hazard Statements
Harmful if swallowed
May cause drowsiness or dizziness
Highly flammable liquid and vapor



Precautionary Statements - Prevention

Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
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 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
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
IN CASE OF FIRE: Use CO_2, 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

Other Hazards

Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ethyl ether	60-29-7	65-75
Ethyl Alcohol	64-17-5	20-30
Cellulose nitrate	9004-70-0	5-10

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. Rinse mouth.

Most important symptoms and effects

Symptoms 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. Harmful if swallowed. 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 Do not use a solid water stream as it may scatter and spread fire.

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 Handle in accordance with good industrial hygiene and safety practice. 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. Do not eat, drink or smoke when using this product.

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

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl ether 60-29-7	STEL: 500 ppm TWA: 400 ppm	TWA: 400 ppm TWA: 1200 mg/m^3 (vacated) TWA: 400 ppm (vacated) TWA: 1200 mg/m^3 (vacated) STEL: 500 ppm (vacated) STEL: 1500 mg/m^3	IDLH: 1900 ppm
Ethyl Alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3

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. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Very viscous amber liquid clear	**Odor**	Ether
Color	Amber	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	35.6 °C / 96 °F	
Flash Point	-35.6 °C / -32 °F	Tag Closed Cup
Evaporation Rate	< 1	(Water = 1)
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	36.0%	
Lower Flammability Limit	1.9%	
Vapor Pressure	442 mmHg	@ 20 C
Vapor Density	>1	(Air=1)
Specific Gravity	0.770	(1=Water)
Water Solubility	Insoluble in water	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

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 Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Avoid breathing vapors or mists.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl ether 60-29-7	= 1215 mg/kg (Rat)	> 20 mL/kg (Rabbit)	-
Ethyl Alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Cellulose nitrate 9004-70-0	> 5 g/kg (Rat)	-	-

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. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as an alcoholic beverage. Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl ether 60-29-7		Group 3		
Ethyl Alcohol 64-17-5	A3	Group 1	Known	X
Cellulose nitrate 9004-70-0		Group 2A		X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 3 IARC components are "not classifiable as human carcinogens"
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

STOT - single exposure May cause drowsiness or dizziness.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethyl ether 60-29-7		2560: 96 h Pimephales promelas mg/L LC50 flow-through 10000: 96 h Lepomis macrochirus mg/L LC50 static	EC50 = 5600 mg/L 15 min	165: 24 h Daphnia magna mg/L EC50
Ethyl Alcohol 64-17-5		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Ethyl ether 60-29-7	0.82
Ethyl Alcohol 64-17-5	-0.32

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

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Ethyl ether 60-29-7		Included in waste stream: F039		U117

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

Chemical Name	California Hazardous Waste Status
Ethyl ether 60-29-7	Ignitable Reactive

Ethyl Alcohol 64-17-5	Toxic Ignitable
Cellulose nitrate 9004-70-0	Ignitable Reactive

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
Marine Pollutant	This material may meet the definition of a marine pollutant

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)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethyl ether 60-29-7	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

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 does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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
Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Chemical Name	California Proposition 65
Ethyl Alcohol - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethyl ether 60-29-7	X	X	X
Ethyl Alcohol 64-17-5	X	X	X
Cellulose nitrate 9004-70-0	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
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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