

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** COLLODION HV

PART NUMBER:

GENERAL USE: Medical Skin Coating

PRODUCT DESCRIPTION: Extremely flammable clear liquid, ether odor



MANUFACTURER'S NAME

**Mavidon Medical Products**

DATE PREPARED: April 9, 2009

SUPERSEDES: August 21, 2006

EMAIL ADDRESS: info@mavidon.com

Page 1 of 4

ADDRESS (NUMBER, STREET, P.O. BOX)

1820 2nd Avenue North

(CITY, STATE AND ZIP CODE)

Lake Worth, FL 33461

COUNTRY

USA

TELEPHONE NUMBER FOR INFORMATION

(561) 585-2227

EMERGENCY TELEPHONE NUMBER

Infotrac (800) 535-5053 Outside USA (352) 323-3500

## SECTION 2 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Clear amber extremely flammable viscous liquid, potentially hazardous vapors. Can cause eye and skin irritation upon contact. Inhalation of vapors can cause anesthetic effect leading to death in poorly ventilated areas. Hazard symbols: F+, Xn; Risk Phrases: R-12, 19, 22, 66, 67

### POTENTIAL HEALTH EFFECTS

**INHALATION:** Inhalation of mists or vapors may cause irritation to upper respiratory tract and mucous membranes.

**SKIN:** Skin irritant, contact with the skin will cause irritation, local redness.

**EYES:** This product is an eye irritant. Contact with the eyes will cause irritation.

**INGESTION:** May cause gastric distress, vomiting and diarrhea.

CARCINOGENICITY

NTP?

No

IARC MONOGRAPHS?

No

OSHA REGULATED?

No

## SECTION 3 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	% (by weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES Full Text Section 16
Ethyl ether (a,b)	65 - 75	60-29-7	200-467-2	F+, Xn	R-12, 19, 22, 66, 67
Ethanol (denatured)	20 - 30	64-17-5	200-578-6	F	R-11
Nitrocellulose, colloided, granular (d)	3 - 7	9004-70-0	603-037-01-3	F	R-1, 3

(a) See section 15

(b) Indicates that the Resource Conservation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.

(d) EU Index No. (European Union Index Number) is listed if EINECS (European Inventory of Existing Commercial Chemical Substances) number is not available.

**MATERIAL SAFETY DATA SHEET**

PRODUCT NAME: COLLODION HV  
April 9, 2009

Page 2 of 4

**SECTION 4 - FIRST AID MEASURES**

**INHALATION:** Remove affected person to fresh air; if symptoms persist seek medical attention.

**SKIN:** Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

**EYES:** Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

**INGESTION:** Give two glasses of water for dilution; DO NOT induce vomiting; seek medical attention; never give anything by mouth to an unconscious person.

**SECTION 5 - FIRE FIGHTING MEASURES**

**GENERAL HAZARDS:** Product is extremely flammable. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide. Vapors may cause a flash fire or ignite explosively. Vapors may travel a considerable distance to a source of ignition and flash back.

**EXTINGUISHING MEDIA**

Carbon dioxide, water fog, dry chemical, chemical foam

**FIRE FIGHTING PROCEDURES**

Firefighters must wear full facepiece self - contained breathing apparatus in positive pressure mode. Do not use solid stream of water since stream will scatter and spread fire. Fine water spray can be used to keep fire - exposed containers cool.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water on pool fires as product may reignite on water surface. Caution - Material is extremely flammable!

**HAZARDOUS COMBUSTION PRODUCTS**

Smoke, fumes, oxides of carbon

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** CAUTION - EXTREMELY FLAMMABLE - Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

**SECTION 7 - HANDLING AND STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. CAUTION - EXTREMELY FLAMMABLE - keep away from all sources of ignition. "Empty" containers may contain residue which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well ventilated work areas to minimize exposure when handling this material.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

HAZARDOUS COMPONENTS	NIOSH				ACGIH			
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
Ethyl ether (a,b)		--		--		1210		1520
Ethanol (denatured)	--	--	--	--	1000	1884	--	--
Nitrocellulose, colloided, granular (d)	not established				not established			

(a) See section 15

**PERSONAL PROTECTION:**

**RESPIRATORY PROTECTION:** None required; however, if misting occurs, NIOSH approved respirator capable of removing particulate from air must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

**PROTECTIVE GLOVES:** Neoprene or rubber gloves with cuffs.

**EYE PROTECTION:** Chemical splash goggles with side shields Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Safety eyebath nearby

**WORK / HYGIENIC PRACTICES:** Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

**MATERIAL SAFETY DATA SHEET**

PRODUCT NAME: COLLODION HV  
April 9, 2009

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR Viscous colorless liquid, ether odor	VAPOR PRESSURE 442 mm Hg @ 20° C
pH Not determined	SPECIFIC GRAVITY (WATER = 1) 0.770
BOILING POINT / BOILING RANGE 96° F ( 35.6° C )	SOLUBILITY IN WATER Insoluble
FLASH POINT -32° F ( -35.6° C ) TCC	VISCOSITY Not determined
FLAMMABLE LIMITS LEL: 1.9% UEL: 36.0%	VAPOR DENSITY (AIR = 1) > 1
AUTOIGNITION TEMPERATURE Not determined	EVAPORATION RATE (WATER = 1) < 1

**SECTION 10 - STABILITY AND REACTIVITY**

STABILITY UNSTABLE: STABLE: X	CONDITIONS TO AVOID: Extreme temperatures, open flames, sparks
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.	
HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X	CONDITIONS TO AVOID: None

**SECTION 11 - TOXICOLOGICAL INFORMATION**

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Ethyl ether (a,b)	60-29-7 200-467-2	1215 mg / kg Oral - rat	6500 ppm / 99M Inhalation - mouse
Ethanol (denatured)	64-17-5 200-578-6	7060 mg / kg Oral - rat	20,000 ppm / 10H Inhalation - rat
Nitrocellulose, colloided, granular (d)	9004-70-0 603-037-01-3	> 5000 mg / kg Oral - rat	Not established
(a) See section 15			

**SECTION 12 - ECOLOGICAL INFORMATION**

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. This product may produce concentrated hazardous vapors or fumes in a disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations for ignitable materials. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway. According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used.

**SECTION 14 - TRANSPORT INFORMATION**

PROPER SHIPPING NAME: Nitrocellulose, solution, flammable  
 DOT HAZARD CLASS / Packaging Group: 3 / II IATA HAZARD CLASS / Packaging Group: 3 / II  
 REFERENCE: 49 CFR 173.150, .202, .242 IMDG HAZARD CLASS: 3 / II  
 UN / NA IDENTIFICATION NUMBER: UN 2059 RID / ADR Dangerous Goods Code: 3  
 LABEL: FLAMMABLE LIQUID UN TDG Class / Packaging Group: 3 / II  
 HAZARD SYMBOLS: F Hazard Identification Number (HIN): 33

Note: Transportation information provided is for reference only. Client is urged to consult 49 CFR 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

**MATERIAL SAFETY DATA SHEET**

PRODUCT NAME: COLLODION HV  
April 9, 2009

**SECTION 15 - REGULATORY INFORMATION**

**TSCA (USA - Toxic Substance Control Act)**

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume or Polymer Exemption has been granted in accordance with 40 CFR 723.50.

**SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)**

311/312 Hazard Categories  
Immediate health, fire hazard

313 Reportable Ingredients:  
None

**CERCLA (USA - Comprehensive Response Compensation and Liability Act)**

(a) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24,000 lbs) or greater amounts, according to 40 CFR 302.

**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

**CPR (Canadian Controlled Products Regulations)**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: B2

**IDL (Canadian Ingredient Disclosure List)**

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

**DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)**

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

**EINECS (European Inventory of Existing Commercial Chemical Substances)**

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index: 1

VbK Index: A I

**RISK PHRASES:**

R12 Extremely flammable.  
R19 May form explosive peroxides.  
R22 Harmful if swallowed  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

**SYMBOL(S) REQUIRED FOR LABEL**



**SAFETY PHRASES:**

S9 Keep container in a well-ventilated place  
S16 Keep away from sources of ignition  
S29 Do not empty into drains  
S33 Take precautionary measures against static discharges.

**SECTION 16 - OTHER INFORMATION**

**Notes & full R-Phrase text**

R1 Explosive when dry.  
R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.

R11 Highly flammable.  
R12 Extremely flammable.  
R19 May form explosive peroxides.  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

**HMIS HAZARD RATINGS**

HEALTH	1	* = Chronic Health Hazard	2 = MODERATE
FLAMMABILITY	4	0 = INSIGNIFICANT	3 = HIGH
PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME

PERSONAL PROTECTIVE EQUIPMENT B Safety Glasses, Gloves

**REVISION SUMMARY:**

This MSDS has been revised in the following sections:  
Format update

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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.