Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Section 1: Identification

Product Name	Collodion Flexible USP
Commercial Name	Not available
Product Use	Manufacture of substances
Restrictions On Use	Not available
Product Code	50-1360

Company

PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: CFR 1910.1200: Flammable liquids Category 2 Static-accumulating flammable liquid Category 1 Carcinogenicity Category 1A

Signal Word: DANGER

Hazard Statement(s): EXTREMELY FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY IRRITATION. MAY CAUSE DROWSINESS OR DIZZINESS.

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Response	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3: Composition/Information on Ingredients

Substance/Mixture	Mixture
Components	Cellulose nitrate, Ethyl ether,Camphor(DL), Water, Castor oil, Ethyl alcohol 200 Proof
% By Weight	Cellulose nitrate:5%, Ethyl ether:65%,Camphor(DL):<10%, Water:<10%, Castor oil:<10%, Ethyl alcohol 200 Proof:20-25
CAS#	Mixture
Molecular Weight	Not available.
Chemical Formula	Not applicable
Synonym(s)	Not available.

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Cellulose nitrate	9004-70-0	5	Not available.	ORAL (LD50): Acute: >5000 mg/kg [Rat]. >5000 mg/kg [Mouse].
Ethyl ether	60-29-7	65	TWA: 400 (ppm) from OSHA (PEL) [United States] TWA: 400 STEL: 500 CEIL: 500 (ppm) from ACGIH (TLV) [United States] TWA: 1200 STEL: 1520 CEIL: 1500 (mg/m3) from ACGIH (TLV) [United States] STEL: 500 (ppm) [Australia] TWA: 1200 (mg/m3) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 1215 mg/kg [Rat]. VAPOR (LC50): Acute: 73000 ppm 2 hours [Rat].
Camphor (DL)	76-22-2	<10	TWA: 2 STEL: 3 (ppm) [Australia] TWA: 2 STEL: 3 (ppm) [Canada] TWA: 12 STEL: 19 (mg/m3) [Canada] TWA: 2 (mg/m3) from NIOSH TWA: 2 (mg/m3) from OSHA (PEL) [United States] TWA: 2 STEL: 4 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 2 STEL: 3 (ppm) [United Kingdom (UK)] TWA: 13 STEL: 19 (mg/m3) [United Kingdom (UK)]	ORAL (LD50): Acute: 1310 mg/kg [Mouse].
Water	7732-18-5	<10	Not available	Not available
Castor oil	8001-79-4	<10	Not available	LD50: Not available. LC50: Not available.
Ethyl alcohol 200 Proof	64-17-5	20-25	TWA: 1000 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 1000 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 7060 mg/kg [Rat.]. 3450 mg/kg [Mouse]. VAPOR (LC50): Acute: 20000 ppm 8 hours [Rat]. 39000 mg/m3 4 hours [Mouse].

Section 4: First-Aid Measures

Inhalation Move to fresh air.

Skin Contact Take off immediately all contaminated clothing. Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye Contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Ingestion Rinse mouth. Call a physician or poison control center immediately. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Symptoms/Effects

Acute In high concentrations, vapors and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Irritant

Delayed Symptoms may be delayed.

Immediate Medical Attention

Not available.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media

Highly flammable liquid and vapor. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Unsuitable Extinguishing Media

Avoid water in straight hose stream; will scatter and spread fire.

Products of Combustion

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

Firefighters Special Equipment and Precautions

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Section 6: Accidental Release Measures

Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal. In case of leakage, eliminate all ignition sources. Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

Section 7: Handling and Storage

Handling: Do not taste or swallow. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges. Storage: Keep in a cool, well-ventilated place. Keep material from heat, light, sparks and flame. Keep containers tightly closed.

Section 8: Exposure Controls/Personal Protection

Exposure Limits Ethanol STEL 1.000 ppm US. ACGIH Threshold Limit Values (2011)

Engineering Controls Use explosion-proof ventilation equipment to stay below exposure limits

Personal Protection

Eye/face protection: Wear safety glasses with side shields (or goggles). Skin Protection Hand Protection: Chemical resistant gloves Other: Use protective gloves, goggles and suitable protective clothing. Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Hygiene measures: Do not eat, drink or smoke when using the product. Wash hands after handling. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Section 9: Physical and Chemical Properties

Appearance	Colorless to slightly yellow.Liquid.
Odor	Ether odor
Odor Threshold	Not available

Melting Point	-123 °C	**pH**	Not available
Freezing Point	Not available	**Vapor Pressure**	57,2 kPa
Boiling Point/Range	Not available	**Vapor Density**	2,6 (Air=1)
Decomposition temperature	Not available	**Viscosity**	Not available.
Partition Coefficient: n-octanol/water	Not available	**Evaporation Rate**	37,5 (n-butyl acetate=1)
Flash Point	-45 °C (Closed Cup)	**Autoignition temperature**	180 - 190 °C
Flammability	Flammable liquid	**Flammability or Explosive Limits:**	
		Lower	1,9 %(V)
		Upper	36,0 %(V)

Solubility(ies)	slightly soluable in water
Other	Density: 0,77 g/ml (20 °C) Relative density: 0,77 (20 °C) Explosive properties: Not explosive. Oxidizing properties: Not an oxidizer.

Section 10: Stability and Reactivity

Reactivity	No dangerous reaction known under conditions of normal use
Chemical Stability	Material is stable under normal conditions.
Hazardous Polymerization	Hazardous polymerization does not occur
Conditions to Avoid	Heat, sparks, flames. Contact with air. Shocks and physical damage. Sunlight. Keep away from sources of ignition - No smoking.
Incompatible Materials	Chlorine. Strong oxidizing agents. Strong acids. Strong bases. Amines.
Hazardous Decomposition Products	Thermal decomposition may produce oxides of carbon and nitrogen. Cyanides

Section 11: Toxicological Information

RTECS Not applicable

Acute Toxicity

Diethyl ether LD 50 (Rat): 1.200 - 1.700 mg/kg Ethanol LD 50 (Rat): 7.060 - 15.010 mg/kg Nitrocellulose LD 50 (Rat): > 5.000 mg/kg Dermal Product: No data available. Specified substance(s): Diethyl ether LD 50 (Rabbit): > 20.000 mg/kg Ethanol LDLo (Rabbit): 20.000 mg/kg Inhalation Product: No data available. Specified substance(s): Ethanol LC 50 (Rat): 116,9 - 133,8 mg/l Repeated dose toxicity Product: No data available. Specified substance(s): Diethyl ether LOAEL (Rat, Oral, 13 Weeks): 2.000 mg/kg NOAEL (Rat, Oral, 13 Weeks): 500 mg/kg NOAEL (Rat, Inhalation, 13 Weeks): 480 - 3.300 ppm(m) NOAEL (Rat, Inhalation, 30 Weeks): 20.000 ppm(m) Ethanol LOAEL (Rat, Inhalation, 1 - 6 Weeks): 13,3 mg/l NOAEL (Rat, Inhalation, 1 - 6 Weeks): 0,26 - 13,3 mg/l NOAEL (Rat, Oral, 90 d): 3.250 mg/kg NOAEL (Rat, Oral, 7 - 14 Weeks): 10 %(m)

Skin Corrosion/Irritation

Prolonged skin contact may cause temporary irritation.

Serious Eye Damage/Irritation

May cause temporary eye irritation.

Respiratory or Skin Sensitization

Not a skin nor a respiratory sensitizer.

Germ Cell Mutagenicity

Not available

Carcinogenicity

May cause cancer.

Reproductive Toxicity
May damage fertility or the unborn child.

Routes of Entry
Inhalation. Eye. Ingestion.

Symptoms Related to Exposure
Not available

Potential Health Effects
May be fatal if swallowed and enters airways.

Target Organ(s) Not available

Section 12: Ecological Information

Ecotoxicity
Diethyl ether LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2.560 mg/l LC 50 (Bluegill (Lepomis macrochirus), 96 h): > 10.000 mg/l LC 50 (Carp (Leuciscus idus melanotus), 48 h): 2.840 mg/l EC 50 (Fathead minnow (Pimephales promelas), 96 h): 2.260 mg/l Ethanol LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 11.850 - 20.100 mg/l LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.480 - 29.400 mg/l LC 50 (Carp (Leuciscus idus melanotus), 48 h): 8.140 mg/l EC 50 (Fathead minnow (Pimephales promelas); Rainbow trout (Oncorhynchus mykiss), 96 h): 12.900 - 28.900 mg/l EC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 13.000 mg/l Aquatic Invertebrates Product: No data available. Specified substance(s): Diethyl ether EC 50 (Daphnia magna, 24 h): 165 mg/l Ethanol EC 50 (Water flea (Daphnia obtusa), 48 h): 10.100 - 22.200 mg/l LC 50 (Water flea (Daphnia magna), 48 h): 7.560 - 15.386 mg/l LC 50 (Ceriodaphnia dubia, 48 h): 5.012 mg/l EC 50 (Water flea (Daphnia magna), 48 h): > 10.000 mg/l Fish Product: No data available. Specified substance(s): Ethanol EC 50 (Oryzias latipes, 200 h): 9.164 - 14.536 mg/l NOAEL (Oryzias latipes, 200 h): 7.900 - 15.800 mg/l LOAEL (Oryzias latipes, 200 h): 7.900 - 39.505 mg/l Aquatic Invertebrates Product: No data available. Specified substance(s): Diethyl ether NOAEL (Daphnia magna, 21 d): 100 mg/l EC 50 (Daphnia magna, 21 d): > 100 mg/l Ethanol NOAEL (Daphnia magna, 21 d): > 10 mg/l LOAEL (Biomphalaria tenagophila, 8 Weeks): 19,8 mg/l NOAEL (Ceriodaphnia dubia, 10 d): 2 - 9,6 mg/l NOAEL (Biomphalaria tenagophila, 8 Weeks): 19,8 mg/l LC 50 (Ceriodaphnia dubia, 10 d): 1.806 mg/l

Persistance and Degradability
Not available

Bioaccumulative Potential
Not available

Mobility in Soil
Not available

Other Adverse Effects
Harmful to aquatic organisms.

Section 13: Disposal Considerations

Waste Disposal
Discharge, treatment, or disposal may be subject to national, state, or local laws

Disposal of Container
Since emptied containers retain product residue, follow label warnings even after container is emptied.

Other Considerations
Not available

Section 14: Transport Information

DOT Classification
UN Number: UN 1993 UN Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.(DIETHYL ETHER, ETHYL ALCOHOL) Transport Hazard Class(es) Class: 3 Label(s): 3 Packing Group: II Marine Pollutant: No Special precautions for user: Not determined.

Section 15: Regulatory Information

Regulations

Not available

Other
Not available.

Section 16: Other Information

Material Safety Data Sheet prepared by: PCCA The information in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond PCCA's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the SDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the SDS. The user should review these regulations to ensure full compliance.