

COLLODIUM

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name:	Collodion
	Collodium
	Collodium
	Collodion
	Kollodium
N° CAS:	N/A
N° EC:	N/A

1.2 Relevant identified uses of the substance/mixture and uses advised against

Identified uses:	Active Pharmaceutical Ingredient or Excipient.
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1.3 Details of the supplier of the safety data sheet

Company:	Magis-Pharma NV
	Neerlandweg 24
	2610 Wilrijk
	Belgium
Telephone:	(+32) (0)3 457 11 76
Email:	info@magis-pharma.be
Web page:	www.magis-pharma.be

1.4 Emergency telephone number

Public utility foundation:	Belgisch Antigifcentrum	Centre Antipoisons Belge
Telephone:	(+32) (0)70 245 245	(Service 24/7)
Web page:	www.antigifcentrum.be	www.centreantipoisons.be

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance/mixture

Classification according to (EC) n° 1272/2008

Flam. Liq. 1	H224
Acute Tox. 4	H302
STOT SE 3	H336

2.2 Label elements

Labelling according to (EC) n° 1272/2008

Hazard pictogram(s):



Signal word(s): Danger

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Hazard statements:	Extremely flammable Irritant
H224	Extremely flammable liquid and vapour.
EUH019	May form explosive peroxides.
H302	Harmful if swallowed.
EUH066	Repeated exposure may cause skin dryness or cracking.
H336	May cause drowsiness or dizziness.
Precautionary statements:	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/... equipment.
P242	Use non-sparking tools.
P501	Dispose of this substance and its container to a special or hazardous waste collection point in accordance with local, regional, national and/or international regulations.
Additional applicable label elements:	Not applicable.

2.3 Other hazards

Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name: Collodion

3.2 Mixtures

Collodion contains $\geq 5.0\%$ (m/m) or $\geq 4.0\%$ (m/V) of pyroxylin in ether/alcohol (75/25 V/V).

Product name:	Ethyl Ether
IUPAC name:	Ethoxyethane
Synonyms:	Ether Diethyl ether
N° CAS:	60-29-7
N° EC:	200-467-2
Molecular Formula:	C ₄ H ₁₀ O
Content:	50 ≤ x < 100

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Product name:	Ethanol
IUPAC name:	Ethanol
Synonyms:	Ethyl alcohol Alcohol
N° CAS:	64-17-5
N° EC:	200-578-6
Molecular Formula:	C ₂ H ₆ O
Content:	15 ≤ x < 30
Product name:	Nitrocellulose (N > 12.6 %)
IUPAC name:	[(2S,3R,4S,5R,6R)-2-[(2R,3R,4S,5R,6S)-4,5-dinitrooxy-2-(nitrooxymethyl)-6-[(2R,3R,4S,5R,6S)-4,5,6-trinitrooxy-2-(nitrooxymethyl)oxan-3-yl]oxyoxan-3-yl]oxy-3,5-dinitrooxy-6-(nitrooxymethyl)oxan-4-yl] nitrate
Synonyms:	Pyroxylin Cellulose nitrate
N° CAS:	9004-70-0
N° EC:	682-719-5
Molecular Formula:	C ₁₈ H ₂₁ N ₁₁ O ₃₈
Content:	5 ≤ x < 15

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes:	Consult a doctor. Show the safety data sheet to the doctor on duty.
After inhalation:	Take to fresh air. If breathing is irregular, call a doctor immediately. Only give artificial respiration if breathing stops or under medical supervision.
After skin contact:	Wash immediately with plenty of soap and water for at least 15 minutes. Remove all contaminated clothing immediately. Get medical attention if irritation develops and persists.
After eye contact:	Remove contact lenses and rinse immediately with plenty of water, including under the eyelids, for at least 15 minutes. Get medical attention.
After ingestion:	If conscious, give the victim plenty of water to drink. Never give anything by mouth to an unconscious person. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Remove person to fresh air.
- In case of asphyxiation, provide artificial respiration.
- In case of persistent illness, seek medical assistance.

4.3 Indication of any immediate medical attention and special treatment needed

- Wash with plenty of water. Remove contaminated clothing.

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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Foam, dry powder, carbon dioxide, sand, water mist. Neighbouring fires (containers exposed to fire): Water spray or fog.
Unsuitable extinguishing media:	Direct water jet.

5.2 Special hazards arising from the substance/mixture

Not available.

5.3 Advice for firefighters

Surrounding fires:	Cool containers with water to prevent decomposition of product and development of potential health hazards. Always use full fire protection. Collect water from which must not enter sewage system. Dispose of contaminated water used for extinguishing and residues in accordance with current regulations.
Protection against fire:	Helmet with visor, flame retardant clothing (jacket and trousers with straps around the arms, legs and waist, EN 469), gloves (fireproof and dielectric, EN 659), a mask with face mask covering the whole face of the operator or the car (self protective) in case of large amounts of smoke, a self-contained breathing apparatus (EN 137).
Hazardous combustion products:	Not available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove all ignition sources. Remove persons to a safe place. Wear a mask, solvent resistant protective gloves, safety goggles and protective clothing. Refer to protective measures in sections 7 and 8.

For emergency responders

Remove all ignition sources. Remove persons to a safe place. Wear a mask, solvent resistant protective gloves, safety goggles and protective clothing. Refer to protective measures in sections 7 and 8.

6.2 Environmental precautions

Do not allow to enter drainage system. Avoid contamination of soil, water supplies and drains.

6.3 Methods and material for containment and cleaning up

Suitable collection material: dry, inert absorbent material (vermiculite, sand, earth). Wash with plenty of water and quickly recover the product.

6.4 Reference to other sections

For exposure control and personal protective measures, see section 8.
For waste disposal, follow the recommendations in section 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling:	Not available.
Personal protection:	Not available.
Technical protective measures:	Avoid the formation of electrostatic charges.
Handling:	Not available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:	In tight containers.
Conditions for safe storage, including any incompatibilities:	In tight containers, at a temperature not exceeding 30 °C, remote from fire. In a cool, dry and well-ventilated place
Storage – away from:	Remote from fire. Store away from light, from sources of ignition and heat.

7.3 Specific end use(s)

Active Pharmaceutical Ingredient or Excipient

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Limit values (TLV)

Type	Country	TWA/8h		STEL/15 min	
		mg/m ³	mg/kg	mg/m ³	mg/kg
TLV-ACHIG				1884	1000
AGW	DEU	960	500	1920	1000
MAK	DEU	960	500	1920	1000
VLA	ESP			1910	1000
VLEP	FRA	1900	1000	9500	5000
WEL	GRB	1920	1000		

Expected concentration of no effect on the environment - PNEC

Freshwater reference value:	0.96 mg/L
Reference value marine water:	0.79 mg/L
Reference value for sediment in freshwater:	3.6 mg/kg
Reference value for sediment in marine water:	2.9 mg/kg
Reference value for water, intermittent release:	2.75 mg/L
Reference value for micro-organisms STP:	580 mg/L
Reference value for food chain:	0.72 mg/kg
Reference value for terrestrial compartment:	0.63 mg/kg

Health - Derived No Effect Level - DNEL/DMEL

Laboratory effects

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Exposure route

Acute local

Acute systemic

Chronic local

Chronic systemic

Inhalation

1900 mg/m³

VND

VND

950 mg/m³

Dermal

VND

343 mg/kg

8.2 Exposure controls

Appropriate engineering control

Since the use of appropriate technical measures should always take precedence over personal protective equipment, ensure good ventilation at the workplace by effective local suction. When choosing personal protective equipment, ask your chemical suppliers if this is necessary. Personal protective equipment must be CE-marked for compliance with applicable regulations. Provide an emergency shower with a viscoelastic tray.

Hygiene measures: Handle with proper industrial hygiene precautions, and observe safety practices. Wash hands before breaks and after finishing work.

Individual protection measures

Eye/face protection: Protective face shields and safety goggles according to EN166.

Skin protection: Choose body protection according to the quantity and concentration of the hazardous substance in the workplace.

Hand protection: Handle with gloves.

The selected protective gloves must comply with the specifications of EU Directive 89/686/EEC and the derived EN 374 standard.

Respiratory protection: Where risk assessment shows that air-purifying respirators are appropriate, use dust mask type N95 (USA) or type P1 (EN 143).

Use respirators and components tested and approved under appropriate governmental standards such as NIOSH (US) or CEN (EU).

Thermal hazards: Not determined.

Environmental exposure control

Not available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Liquid

Odour: Not available.

Odour threshold: Not available.

pH: 4.3

Melting/freezing point: Not available.

Initial boiling point: 34.6 °C

Boiling range: Not available.

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Flash point:	-52 °C
Evaporation rate:	Not available.
Flammability (solid/gas):	Not available.
Upper/lower flammability or explosive limits:	Upper explosive limit: 1.7 % (V/V) Lower explosive limit: 36 % (V/V)
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	0.761 g/mL (20 °C)
Solubility:	Not available.
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	170 °C
Decomposition temperature:	Not available.
Viscosity:	Not available.
Explosive properties:	Not available.
Oxidising properties:	Not available.

9.2 Other information

Molecular weight: 115.91 g/mol
 Total solids (250 °C): 5.00 %
 VOC (Directive 2010/75/EC): 95.00 % - 726.78 g/L
 VOC (Volatile Organic Carbon): 58.78 % - 447.39 g/L

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

May cause hazardous reactions (see following sections).

10.2 Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions

May cause hazardous reactions (see following sections).

10.4 Conditions to avoid

High temperatures.

10.5 Incompatible materials

Strong oxidizing agents and alkali metals.

10.6 Hazardous decomposition products

Nitrous fumes and ether.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	<p>Acute oral toxicity (LD₅₀, mixture): 1642 mg/kg</p> <p>Acute Oral Toxicity (LD₅₀, ethyl ether, mouse): 1215 mg/kg</p> <p>Inhalation Toxicity (LD₅₀, ethyl ether, mouse): 73000 mg/kg/2 h</p> <p>Acute Oral Toxicity (LD₅₀, ethyl ether, mouse): > 6200 mg/kg</p> <p>Inhalation toxicity (LD₅₀, ethyl ether, mouse): > 50 mg/kg/4 h</p> <p>Acute oral toxicity (LD₅₀, Nitrocellulose, rat): > 5000 mg/kg</p>
Skin corrosion/irritation:	Not available.
Serious eye damage/irritation:	Not available.
Respiratory/skin sensitisation:	Not available.
Germ cell mutagenicity:	Not available.
Carcinogenicity:	Not available.
Reproductive toxicity:	Not available.
Summary of evaluation of the CMR properties:	Not available.
STOT-single exposure:	May cause drowsiness or dizziness.
STOT-repeated exposure:	May cause skin dryness and irritation.
Aspiration Hazard:	Not available.
Other:	Signs and Symptoms of Exposure: Drowsiness, dizziness, euphoria, anxiety, spasms and narcosis.

11.2 Additional information on potential adverse human health effects and symptoms

Eye contact:	Not available.
Skin contact:	Not available.
Inhalation:	Not available.
Ingestion:	Harmful if swallowed.
Aspiration:	Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Ethanol	
LC ₅₀ (fish):	13 mg/L/96 h (<i>Salmo gairdneri</i>)
EC ₅₀ (crustaceans):	12340 mg/L/48 h (<i>Daphnia magna</i>)
EC ₅₀ (algae aquatic plants):	275 mg/L/72 h (<i>Chlorella vulgaris</i>)

12.2 Persistence and degradability

Product	Solubility in water	Persistence and degradability
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Diethyl ether	> 100000 mg/L	No data available.
Ethanol	1000 – 10000 mg/L	Readily biodegradable.
12.3 Bioaccumulative potential		
Product	Partition coefficient n-octanol/water (20 °C)	
Diethyl ether	0.83	
Ethanol	-0.35	
12.4 Mobility in soil		
Not available.		
12.5 Results of PBT and vPvB assessment		
Not available.		
12.6 Other adverse effects		
Not available.		
SECTION 13: DISPOSAL CONSIDERATIONS		
13.1 Waste treatment methods		
<p>Product: Consider all federal, state and local environmental regulations. Contact a licensed professional waste disposal service for disposal of this material. Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.</p> <p>Contaminated container: Dispose of as unused product.</p>		
SECTION 14: TRANSPORT INFORMATION		
Transport information according to ADR/RID/IMDG/ICAO/IATA		
14.1 UN Number		
ADR/ RID(Land),IMDG(Sea), IATA/ICAO (Air) :	2059	
14.2 UN proper shipping name		
ADR/ RID(Land),IMDG(Sea), IATA/ICAO (Air) :	ADR/RID: NITROCELULOSA EN SOLUCIÓN INFLAMABLE IMDG: NITROCELLULOSE SOLUTION, FLAMMABLE IATA: NITROCELLULOSE SOLUTION, FLAMMABLE	
14.3 Transport hazard class(es)		
ADR/ RID(Land),IMDG(Sea), IATA/ICAO (Air) :	3	
14.4 Packing group		
ADR/ RID(Land),IMDG(Sea), IATA/ICAO (Air) :	III	
14.5 Environmental hazards		

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ADR/ RID(Land),IMDG(Sea),
IATA/ICAO (Air) : It is not dangerous for the environment.

14.6 Special precautions for user

ADR/RID	HIN – Kemler: 33	Restriction code: (b)
IMDG	EMS: F-E, S-D	
IATA	Cargo:	Maximum Quantity: 30 L
	Pass.:	Maximum Quantity: 1 L
	Particular instructions:	A3, A91
		Packing Instructions: 361
		Packing instructions: 351

14.7 Transport in bulk according to annex II of Marpol and the IBC Code

Not available.

14.8 Additional transport information

The product is classified according to the hazardous materials conventions.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance/mixture

Hazard symbol:



Irritant Extremely flammable

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.

Safety phrases:

S7 Keep container tightly closed.
S16 Keep away from sources of ignition – No smoking.
S56 Dispose of this material and its container at hazardous or special waste collection point.

15.2 Chemical safety assessment

A chemical safety assessment of the product has not been carried out.

SECTION 16: OTHER INFORMATION

16.1 Changes since the previous version

Not applicable.

16.2 Abbreviations and acronyms used

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	Chemical Abstracts Service (division of the American Chemical Society)

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EC (number):	European Community (number)
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Code for Dangerous Goods
IUPAC:	International Union of Pure and Applied Chemistry
PBT:	Persistent, Bioaccumulative and Toxic substance
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT:	Specific Target Organ Toxicity
UN (number):	United Nations (number)
vPvB:	very Persistent and very Bioaccumulative

16.3 Key literature references/sources for data

European Chemicals Agency.
<https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/>

16.4 Method of classification in case of mixture

Classification based on the main component.

16.5 Relevant Hazard statements and/or precautionary statements

For information on hazard and/or precautionary statements refer to section 2 up to and including section 15.

16.6 Training advisement

Not available.

16.7 Notice for user(s)

The information provided in this MSDS has been established in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council, on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769/EEC and Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

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16.8 Department issuing MSDS

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