



SAFETY DATA SHEET

FLEXIBLE COLLODION

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: Flexible Collodion BP

PRODUCT NO: RM219

SYNONYMS, TRADE NAMES: Flexible Collodion BP

SUPPLIER: J M Loveridge Ltd
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EMERGENCY CONTACT NUMBER:

2 HAZARDS IDENTIFICATION

CLASSIFICATION ACCORDING TO REGULATION (EC) NO. 1272/2008

Flammable Liquid Category 1, H224

Acute Toxicity Category 4, H302

Skin Sensitiser Category 1, H317

Specific Target Organ Toxicity Single Exposure Category 3, H336

For the full text of H-Statements see Section 16

PRIMARY EFFECTS

PHYSICOCHEMICAL

Extremely flammable liquid and vapour.

HUMAN HEALTH

Harmful if swallowed- forms a skin in contact with damp surfaces and may cause blockages in the entry pipes to the lungs and stomach. May cause an allergic skin reaction. May cause drowsiness or dizziness.

ENVIRONMENTAL

None

LABEL ELEMENTS

LABELLING ACCORDING TO REGULATION (EC) NO. 1272/2008

Pictogram:



Signal word: Danger

Hazard Statement(s): H224 – Extremely flammable liquid and vapour.
 H302- Harmful if swallowed.
 H317 – May cause an allergic skin reaction.
 H336- May cause drowsiness or dizziness.

Precautionary Statement(s):

P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
 P280- Wear protective gloves/protective clothing/eye protection/face protection.
 P264- Wash exposed skin thoroughly after handling.
 P301- IF SWALLOWED: SEEK MEDICAL ASSISTANCE IMMEDIATELY.
 P333 + P313 – If skin irritation or rash occurs: Get medical advice/attention.
 P261 – Avoid breathing mist/vapours/spray.

OTHER HAZARDS

This mixture is not classifiable as PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 based on an assessment of the constituent ingredients.

3 COMPOSITION/INFORMATION ON INGREDIENTS

GENERAL COMPOSITIONAL DESCRIPTION

A solution containing approximately 4%w/v Pyroxylin (typically consisting of 65% w/w Nitrocellulose- CAS No. 9004-70-0 and 35% w/w Isopropanol CAS No. 67-63-0), 23% Industrial Methylated Spirits (consisting of approximately 95% Ethanol (CAS No. 64-17-5) and 5% Methanol (CAS 67-56-1)), 71%v/v Diethyl Ether (CAS No. 60-29-7), 2.5%w/v Colophony and 2.5%w/v Castor Oil.

HAZARDOUS COMPONENTS ACCORDING TO REGULATION (EC) NO. 1272/2008

Component Name and identifiers	Classification	Concentration, %w/w
Diethyl ether Index No. 603-022-00-4	Flam. Liquid 1 – H224 Acute Tox. 4 – H302 STOT SE 3 – H336	64-68
Ethanol Index No. 603-002-00-5	Flam. Liq 2 – H225 Eye Irrit. 2 – H319	20-23
Methanol Index No. 603-001-00-X	Flam. Liquid Cat 2 – H225 Acute Tox. Cat 3 – H301, H331, H311	1.0 – 1.2

	STOT SE 1 – H370	
Nitrocellulose EC No. 618-392-2	Expl. 1.1 – H201	3.1 – 3.5
Castor Oil EC No. 232-293-8	Eye Irrit. 2 – H319	3.25
Colophony Index No.650-015-00-7	Skin Sens. 1 – H317	3.25
Isopropranol (Propan-2-ol) Index No. 603-117-00-0	Flam. Liquid 2 – H225 Eye Irrit. 2 – H319 STOT SE 3 – H336	1.7 – 1.9

For the full text of H-Statements see Section 16.

4 FIRST - AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE

Extinguish sources of ignition in the area, and ventilate area. If high vapour concentrations are likely to be present wear a suitable organic vapour respirator or self-contained breathing apparatus.

IF INHALED

Remove to fresh air, keep warm and at rest. If there are any difficulties with breathing give oxygen if available and safe to do so. If breathing stops or gives signs of failing apply artificial respiration and seek medical assistance.

IN CASE OF SKIN CONTACT

Remove contaminated clothing. This should not be worn again until it has been laundered. Allow product to dry and peel off. Apply lanolin type ointment to skin to counteract the defatting action of the product. If pain or discomfort persists seek medical advice.

IN CASE OF EYE CONTACT

Rinse eyes with water and remove contact lenses if possible. Irrigate eyes with water or eye wash solution for at least fifteen minutes. Seek medical assistance.

IF SWALLOWED

SEEK MEDICAL ASSISTANCE IMMEDIATELY. Product forms a film, which must be removed mechanically as it may block the entry passages to the lungs and stomach.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Immediate risk on ingestion is blockage to the airway – this must be mechanically removed. Diethyl ether when inhaled or ingested will cause drowsiness, confusion, excitement, dizziness and faintness. Large doses cause anaesthesia, which may lead to respiratory paralysis and death.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No further information.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

Alcohol resistant foam, carbon dioxide or dry chemical powder. Water spray may be used for cooling containers.

UNSUITABLE EXTINGUISHING MEDIA

Water jet

SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MIXTURE

Toxic oxides of nitrogen are produced when nitrocellulose burns. Burning ethanol produces carbon monoxide or carbon dioxide. Explosion hazards: ether vapour may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

ADVICE FOR FIRE FIGHTERS

Wear full protective clothing and self-contained breathing apparatus. Remove unaffected containers from the vicinity or the fire or cool with water spray.

FURTHER INFORMATION

No further information.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Extinguish sources of ignition, and ventilate area. For moderate to large scale spillages evacuate the area. Wear personal protective equipment as directed in Section 8.

ENVIRONMENTAL PRECAUTIONS

Do not allow product to enter drains or watercourses. Inform local authority and fire service if preparation enters drains or watercourses.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Use non-sparking tools and equipment. Absorb spillage using a proprietary absorbent, scoop up and place in a suitable container, remove to a safe place and dispose of through a licensed waste disposal contractor for incineration. For large scale spillage use absorbent booms to contain spillage. Do not allow to enter drains.

REFERENCE TO OTHER SECTIONS

For personal protective equipment require see Section 8; for disposal information see Section 13.

7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/other equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not eat, drink or smoke when using this product.
- IF ON SKIN: Wash with plenty of soap and water.
- Call a POISON CENTER or doctor/physician if you feel unwell.

Avoid contact with eyes; do not breath vapour; use in a well-ventilated area. Avoid static build up when pouring; earthing of container and receptacle may be required. Handle with care; avoid dropping or dragging containers.

CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES

Store in well closed containers, away from sources of heat and ignition, in a well-ventilated area. Keep cool. Store away from strong oxidisers.

SPECIFIC END USE(S)

No specific guidance relevant.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

APPROPRIATE ENGINEERING CONTROLS

Local exhaust ventilation.

INDIVIDUAL PROTECTION MEASURES, INCLUDING PERSONAL PROTECTIVE EQUIPMENT**EYE/FACE PROTECTION**

Wear goggles or face-shield meeting the requirements of EN166.

SKIN PROTECTION**HAND PROTECTION**

Wear rubber gloves; butyl rubber are most suitable. Wash hands thoroughly with soap and water after use.

OTHER BODY PROTECTION

Overalls, protective apron and protective footwear. Flame retardant anti- static protective clothing is recommended.

RESPIRATORY PROTECTION

Use an appropriate CEN approved organic vapour mask (e.g. meeting EN14387) or full face supplied air respirator if vapour is likely to be present.

ENVIRONMENTAL EXPOSURE CONTROLS

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9 PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance	A light yellow clear liquid.
b) Odour	Characteristic odour of diethyl ether
c) Odour threshold	No test data
d) pH	6 – 8
e) Melting/freezing point	No test data
f) Initial boiling point and boiling range	33°C (measured) to 78°C (estimated)
g) Flash point	-10°C (Closed cup)
h) Evaporation rate	No test data
i) Flammability (solid,gas)	Not applicable.
j) Upper/lower flammability or explosive limits	Lower Limit 1.0%v/v Upper Limit 48.0%v/v for Diethyl Ether.

k) Vapour pressure	563hPa at 20°C (Diethyl Ether)
l) Vapour density	2.55 (Diethyl Ether).
m) Relative Density	0.77 at 20°C
n) Solubility in	Diethyl ether and acetone.
o) Partition coefficient: n-octanol/water	Diethyl Ether log Pow = 0.89
p) Auto-ignition temperature	180°C (Diethyl ether)
q) Decomposition temperature	180°C – Nitrocellulose deflagrates at this temperature.
r) Viscosity	150 – 1000cPs
s) Explosive properties	Explosion hazard when exposed to heat or source of ignition.
t) Oxidising properties	None.

OTHER INFORMATION

None applicable.

10 STABILITY AND REACTIVITY

REACTIVITY

Nitrocellulose reacts with alkalis, amines and strong acids. Diethyl ether may undergo violent reactions or ignition on contact with halogens, oxidants, sulphur and sulphur compounds.

CHEMICAL STABILITY

Stable under ambient conditions and if handled in accordance with the guidance in Section 7.

POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous reactions may occur if mixed with the chemicals identified in 10.

CONDITIONS TO AVOID

Elevated storage temperatures.

INCOMPATIBLE MATERIALS

Strong alkalis and acids, amines, oxidisers, halogens, sulphur and sulphur compounds.

HAZARDOUS DECOMPOSITION PRODUCTS

Toxic oxides of nitrogen are produced when nitrocellulose decomposes.

11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

Harmful if swallowed. Harmful by inhalation, causing drowsiness or dizziness.

Diethyl ether: LD₅₀ Oral Rat = 1213mg/kg; LC₅₀ 4H Rat = 32,000mg/L

Ethanol: LD₅₀ Rat Oral 7060mg/kg

IRRITATION

Not designated as a skin irritant, but may cause defatting and cracking on repeated exposure due to diethyl ether content.

CORROSIVITY

Based on available data on the hazardous constituents identified in Section 3, the classification criteria are not met.

SENSITISATION

May cause an allergic skin reaction due to Colophony Resin.

REPEATED DOSE TOXICITY

Based on available data on the hazardous constituents identified in Section 3, the classification criteria are not met.

CARCINOGENICITY

Based on available data on the hazardous constituents identified in Section 3, the classification criteria are not met.

MUTAGENICITY

Based on available data on the hazardous constituents identified in Section 3, the classification criteria are not met.

TOXICITY FOR REPRODUCTION

Based on available data on the hazardous constituents identified in Section 3, the classification criteria are not met.

ADDITIONAL INFORMATION

Diethyl ether when inhaled or ingested will cause drowsiness, confusion, excitement, dizziness and faintness. Large doses cause anaesthesia, which may lead to respiratory paralysis and death.

12 ECOLOGICAL INFORMATION

TOXICITY

Toxicity to fish	No data available for product. No constituents are classified with respect to toxicity to fish.
Toxicity to Daphnia and other aquatic invertebrates	No data available for product. No constituents are classified with respect to toxicity to aquatic invertebrates.
Toxicity to algae	No data available for product. No constituents are classified with respect to toxicity to algae.

PERSISTENCE AND DEGRADABILITY

Based on available data on the hazardous constituents identified in Section 3, the product is expected to readily biodegrade.

BIOACCUMULATIVE POTENTIAL

Based on available data on the hazardous constituents identified in Section 3, the product will not bioaccumulate.

MOBILITY IN SOIL.

For the hazardous constituents identified in Section 3:
 Diethyl ether is expected to have a high mobility in soil.
 Ethanol is expected to have a very high mobility in soil.
 Nitrocellulose – No data available
 Castor oil – No data available
 Colophony is expected to have low mobility in soil.

Isopropanol is expected to have a very high mobility in soil.

RESULTS OF PBT AND vPvB ASSESSMENT

The mixture contains no constituents which are classified as PBT or vPvB.

OTHER ADVERSE AFFECTS

No information.

13 DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT

Dispose of product through a suitable licenced waste disposal contractor.

CONTAMINATED PACKAGING

Dispose of containers as for waste product through a suitable licenced waste disposal contractor.

14 TRANSPORT INFORMATION

Transport Mode	Road (ADR)	Sea (IMDG)	Air (IATA)
UN number	UN1993		
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (CONTAINS DIETHYL ETHER AND ETHANOL)		
Transport Hazard Class(es)	3		
Packing group	I		
Environmental hazards	None	None	None
Special precautions for user	None	None	None
Additional information	Transport Cat1 Tunnel Coe D/E Hazard Ident. 33	EmS F-E, S-E	ERG Code: 3H

15 REGULATORY INFORMATION

This safety data sheet has been compiled in accordance with the requirements of Regulation (EC) No. 1907/2006.

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

None applicable.

CHEMICAL SAFETY ASSESSMENT

A chemical safety assessment has not been carried out for this product.

16 OTHER INFORMATION

CHANGES MADE IN THIS UPDATE TO THE SAFETY DATA SHEET

Full update of the Safety Data Sheet to bring in line with the requirements of Regulation (EC) No. 1907/2006. All sections have been updated.

REFERENCES USED IN THIS UPDATE TO THE SAFETY DATA SHEET

Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

EC Directive 1999/45/EC on the classification, packaging and labelling of dangerous goods preparations.

European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) 2015 Edition

International Maritime Dangerous Goods Code 2014 Edition

IATA Dangerous Goods Regulations 56th Edition 2015

Martindale 35th edition pages 1462 (Ethanol), 1450 (Pyroxylin), 1607 (Ether), 2067 (Caster Oil) and 2075 (Colophony)

Micromedex Poisindex(R) Substance Identification (Castor Oil, Colophony, Ethanol, Ether and Nitrocellulose).

Sax's Dangerous Properties of Industrial Materials Eighth Edition pages 1572 EFU000 (Ethyl Alcohol), page 1614

EJU000 (Ethyl Ether), page 727 CCU250 (Cellulose Nitrate), page 2040 INJ000 (Isopropyl alcohol)m page 940 CNH000 (Collodion).

The Merck Index, 13th edition, entries 3795 (Ethyl Alcohol), 3840 (Ethyl Ether), 5228 (Isopropyl alcohol).

IUCLID Dataset for Diethyl Ether, CAS 60-29-7.

C&L Inventory online, ECHA Website.

National Library of Medicine Hazardous Substances Data Bank online, entries for Diethyl Ether, Ethanol, Nitrocellulose, Castor Oil, Colophony Resin and Isopropanol.

METHODS OF EVALUATION USED FOR CLASSIFICATION OF THIS MIXTURE UNDER ARTICLE 9 OF THE REGULATION (EC) NO. 1272/2008

This safety data sheet has been produced using expert judgement based on the classification of constituents of this product as allowed under ARTICLE 9.

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER OTHER SECTIONS

H224- Extremely flammable liquid and vapour.

H302- Harmful if swallowed.

H317- May cause an allergic skin reaction.

H336- May cause drowsiness or dizziness.

H225- Highly flammable liquid and vapour.

H201- Explosive; mass explosion hazard.

H301 – Toxic if swallowed.

H331 – Toxic if inhaled.

H370 – Causes damage to organs.

H319 – Causes serious eye irritation.

TRAINING RECOMMENDED TO BE CARRIED OUT PRIOR TO USE OF THIS MATERIAL

All staff handling this material must be suitably trained in the safe use of chemicals in the relevant industry/workplace.

DISCLAIMER

The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this SDS is to the best of JML's knowledge correct at the time of publication. However, no guarantee is given to its accuracy, reliability or completeness and the information may not be valid if the product is used in combination with other materials or process. It is the responsibility of the user to ensure that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulatory requirements.