Collodion

SECTION I - PRODUCT IDENTIFICATION

Product Name: Collodion
Common Synonyms: Pyroxylin Solution; Nitrocellulose Solution; Nitrocotton Solution
Chemical Family: Nonaqueous Solutions
Formula: Mixture: Pyroxylin + Ethanol + Diethyl Ether
Formula Wt.: N/A
CAS No.: 9004-70-0
NIOSH/RTECS No.: QW0970000
Product Use: Laboratory Reagent
Product Codes: 9202

PRECAUTIONARY LABELING

BAKER SAF-T-DATA+ System

HEALTH FLAMMABILITY REACTIVITY CONTACT

2 4 1 0
MODERATE EXTREME SLIGHT NONE

Laboratory Protective Equipment

GOGGLES LAB COAT VENT HOOD PROPER CLOTHES EXTINGUISHER

U.S. Precautionary Labeling

DANGER!

CAUSES IRRITATION. EXTREMELY FLAMMABLE. HARMFUL IF SWALLOWED OR INHALED.
Keep away from heat, sparks, flame. Avoid contact with eyes, skin, clothing.
Avoid breathing vapor. Keep in tightly closed container. Use with adequate ventilation. Wash thoroughly after handling. In case of fire, use alcohol foam, dry chemical, carbon dioxide - water may be ineffective. In case of spill, soak up with sand or earth. Flush spill area with water.

0020
Precautionary Labeling (Continued)

International Labeling

Avoid contact with eyes. After contact with skin, wash immediately with plenty of water. Keep container tightly closed.

S-2-F-T-DATA* Storage Color Code: Red (flammable)

Section II - Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Weight %</th>
<th>OSHA/PEL</th>
<th>ACGIH/TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyroxylum</td>
<td>9004-70-0</td>
<td>5-10</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>20-30</td>
<td>1000 ppm</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Diethyl Ether</td>
<td>60-29-7</td>
<td>60-70</td>
<td>400 ppm</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

Section III - Physical Data

Boiling Point: 34°C (93°F)
(at 760 mm Hg)

Vapor Pressure (mmHg): N/A

Melting Point: N/A

Vapor Density (air=1): N/A

Specific Gravity: 0.77
(H₂O=1)

Evaporation Rate: N/A

(H₂O=1)

% Volatiles by Volume: ~95
(21°C)

pH: N/A

Odor Threshold (ppm): N/A

Physical State: Liquid

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: Light yellow viscous liquid. Ether-like odor.
Collodion

Effective: 04/06/92

Issued: 07/10/93

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Closed Cup): -44°C (-49°F)
NFPA 704M Rating: 1-4-0

Autoignition Temperature: N/A

Flammable Limits: Upper - 36.0 % Lower - 2.0 %

Fire Extinguishing Media
Use alcohol foam, dry chemical or carbon dioxide. (Water may be ineffective.)

Special Fire-Fighting Procedures
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire & Explosion Hazards
Vapors may flow along surfaces to distant ignition sources and flash back. Closed containers exposed to heat may explode. Contact with strong oxidizers may cause fire.

Toxic Gases Produced
oxides of nitrogen, hydrogen cyanide, carbon monoxide, carbon dioxide

Explosion Data-Sensitivity to Mechanical Impact
None identified.

Explosion Data-Sensitivity to Static Discharge
None identified.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLU/TWA): 1200 mg/m³ (400 ppm)

TLU is for Ethyl ether.

Short-Term Exposure Limit (STEL): 1500 mg/m³ (500 ppm)

STEL is for Ethyl ether.

Permissible Exposure Limit (PEL): 1200 mg/m³ (400 ppm)
PEL is for Ethyl ether.

Toxicity of components

Oral Rat LD50 for Ethanol 7060 mg/kg
Intraperitoneal Rat LD50 for Ethanol 4070 mg/kg
Intravenous Rat LD50 for Ethanol 1440 mg/kg
Inhalation-4Hr Mouse LC50 for Ethanol 39 g/m³
Oral Rat LD50 for Diethyl Ether 1215 mg/kg
Intravenous Mouse LD50 for Diethyl Ether 996 mg/kg
Intraperitoneal Mouse LD50 for Diethyl Ether 2420 mg/kg
Inhalation-2Hr Rat LC50 for Diethyl Ether 73.0 ppt

Carcinogenicity: NTP: No IARC: No Z List: No OSHA Reg: No

Carcinogenicity
None identified.

Reproductive Effects
None identified.

Effects of Overexposure

INHALATION: irritation of nose and throat, headache, nausea, vomiting, dizziness, narcosis, respiratory failure, low blood pressure, central nervous system depression

SKIN CONTACT: irritation

EYE CONTACT: irritation

SKIN ABSORPTION: none identified

INGESTION: none identified

CHRONIC EFFECTS: none identified

Target Organs: none identified
SECTION V - HEALTH HAZARD DATA (CONTINUED)

Medical Conditions Generally Aggravated by Exposure
none identified

Primary Routes of Entry
inhalation, skin contact, eye contact

Emergency and First Aid Procedures

INGESTION: CALL A PHYSICIAN. If swallowed, do NOT induce vomiting.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT: In case of contact, flush skin with water.

EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: Yes Pressure: No Reactivity: No

Extremely Hazardous Substance: No

CERCLA Hazardous Substance: Yes Contains Ethane, 1,1'-oxybis (RQ = 100 LBS)

SARA 313 Toxic Chemicals: No

TSCA Inventory: Yes

SECTION VI - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: Will not occur

Conditions to Avoid: heat, flame, other sources of ignition, light, shock

Incompatibles: strong oxidizing agents, strong acids, strong bases, amines

Decomposition Products: oxides of nitrogen, hydrogen cyanide, carbon monoxide, carbon dioxide
C5060 - 04  Collodion  Page: 6  
Effective: 04/06/92  
Issued: 07/10/93

SECTION VII - SPILL & DISPOSAL PROCEDURES

Steps to be Taken in the Event of a Spill or Discharge

Wear self-contained breathing apparatus and full protective clothing. Shut off ignition sources; no flares, smoking or flames in area. Stop leak if you can do so without risk. Use water spray to reduce vapors. Take up with sand or other non-combustible absorbent material and place into container for later disposal. Flush area with water.

J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

Disposal Procedure

Dispose in accordance with all applicable federal, state, and local environmental regulations.

EPA Hazardous Waste Number: D001 (Ignitable Waste)

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

Ventilation: Use general or local exhaust ventilation to meet TLV requirements.

Respiratory Protection: Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 1000 ppm, a chemical cartridge respirator with organic vapor cartridge is recommended. Above this level, a self-contained breathing apparatus is recommended.

Eye/Skin Protection: Safety goggles, rubber gloves are recommended.

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA® Storage Color Code: Red (flammable)

Storage Requirements

Keep container tightly closed. Store in a cool, dry, well-ventilated, flammable liquid storage area. Store in light-resistant containers.

Special Precautions

Bond and ground containers when transferring liquid.

Continued on Page: 7
SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Nitrocellulose, solution, flammable (with not more than 12.6 percent nitrogen, by mass)

Hazard Class: 3 (flammable liquid)

UN/NA: UN2059

Packaging Group: II

Labels: FLAMMABLE LIQUID

Regulatory References: 49CFR 172.101

International (I.M.O.)

Proper Shipping Name: Nitrocellulose, solution, flammable (with not more than 12.6 percent nitrogen, by mass)

Hazard Class: 3.2

UN: UN2059

Marine Pollutants: No

Packaging Group: II

Labels: FLAMMABLE LIQUID

Regulatory References: 49CFR 172.12(b); IMDG Code

AIR (I.C.A.O.)

Proper Shipping Name: Nitrocellulose, solution, flammable (with not more than 12.6 percent nitrogen, by mass)

Hazard Class: 3 (flammable liquid)

UN: UN2059

Packaging Group: II

Labels: FLAMMABLE LIQUID

Regulatory References: 49CFR 172.101; ICAO== We believe the transportation data and references contained herein to be factual and the opinion of qualified experts. The data is meant as a guide to the overall classification of the product and is not package size specific, nor should it be taken as a warranty or representation for which the company assumes legal responsibility.== The information is offered solely for your consideration, investigation, and verification. Any use of the information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations. See shipper requirements 49CFR 172.3 and employee training 49CFR 173.1.

U.S. Customs Harmonization Number: 391220000007
N/A = Not Applicable or Not Available
N/E = Not Established

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes.

Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label.

BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to Customer Service (1-800-JTBAKER) for assistance.

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Approved by Quality Assurance Department.