SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Cineole
Product number: FC74126
Synonyms; trade names: 1,8-Cineole, Eucalyptol
CAS number: 470-82-6
EC number: 207-431-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory reagent. Manufacture of substances. Research and development.

1.3. Details of the supplier of the safety data sheet

Supplier: Carbosynth Ltd
8&9 Old Station Business Park
Compton
Berkshire
RG20 6NE
UK
+44 1635 578444
+44 1635 579444
info@carbosynth.com

1.4. Emergency telephone number

Emergency telephone: +44 7887 998634

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards: Flam. Liq. 3 - H226
Health hazards: Skin Sens. 1 - H317
Environmental hazards: Not Classified

2.2. Label elements

EC number: 207-431-5

Signal word: Warning
Cineole

Hazard statements
H226 Flammable liquid and vapour.
H317 May cause an allergic skin reaction.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances
Product name Cineole
CAS number 470-82-6
EC number 207-431-5
Chemical formula C₁₀H₁₈O

SECTION 4: First aid measures

4.1. Description of first aid measures
General information Get medical advice/attention if you feel unwell.
Inhalation Remove person to fresh air and keep comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention if symptoms are severe or persist.
Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.
Skin contact Remove contaminated clothing. Rinse with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist.
Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

4.2. Most important symptoms and effects, both acute and delayed
General information See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed
Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Cineole

Specific hazards
None known.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances:
Harmful gases or vapours. Oxides of carbon.

5.3. Advice for firefighters
Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapours. Provide adequate ventilation. Eliminate all sources of ignition. Vapours may form explosive mixtures with air. Vapours may accumulate on the floor and in low-lying areas.

6.2. Environmental precautions
Environmental precautions
Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Absorb spillage with sand or other inert absorbent. Clear up spills immediately and dispose of waste safely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Provide adequate ventilation. For waste disposal, see Section 13.

6.4. Reference to other sections
Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Wear protective clothing as described in Section 8 of this safety data sheet. Wash hands thoroughly after handling. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapours. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Keep container tightly closed. Store away from incompatible materials (see Section 10). Store at room temperature.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits
No exposure limits known for ingredient(s).

8.2. Exposure controls
Cineole

Appropriate engineering controls
Provide adequate ventilation.

Eye/face protection
Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>2°C</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>176°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>48°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>0.92</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Insoluble in water. Miscible with the following materials: Ether. Alcohols. Chloroform.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Cineole

**Explosive properties**
No data available.

**Oxidising properties**
No data available.

### 9.2. Other information

**Molecular weight**
154.25

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity**
No data available.

#### 10.2. Chemical stability

**Stability**
Stable under the prescribed storage conditions.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**
No data available.

#### 10.4. Conditions to avoid

**Conditions to avoid**
Heat, sparks, flames.

#### 10.5. Incompatible materials

**Materials to avoid**
Oxidising agents. Strong acids. Acid anhydrides.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products**
Oxides of carbon.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity - oral**

<table>
<thead>
<tr>
<th>Acute toxicity oral (LD₅₀ mg/kg)</th>
<th>2,480.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Species</strong></td>
<td>Rat</td>
</tr>
<tr>
<td><strong>Notes (oral LD₅₀)</strong></td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>ATE oral (mg/kg)</strong></td>
<td>2,480.0</td>
</tr>
</tbody>
</table>

**Acute toxicity - dermal**

| Notes (dermal LD₅₀) | Based on available data the classification criteria are not met. |

**Acute toxicity - inhalation**

| Notes (inhalation LC₅₀) | Based on available data the classification criteria are not met. |

**Skin corrosion/irritation**

| Animal data | Based on available data the classification criteria are not met. |

**Serious eye damage/irritation**

| Based on available data the classification criteria are not met. |

**Respiratory sensitisation**

| Based on available data the classification criteria are not met. |

**Skin sensitisation**

| Based on available data the classification criteria are not met. |
## Cineole

### Skin sensitisation
May cause skin sensitisation or allergic reactions in sensitive individuals.

### Germ cell mutagenicity
Based on available data the classification criteria are not met.

### Genotoxicity - in vitro
Based on available data the classification criteria are not met.

### Carcinogenicity
Based on available data the classification criteria are not met.

### IARC carcinogenicity
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity
Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure
Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure
Not classified as a specific target organ toxicant after repeated exposure.

### Aspiration hazard
Based on available data the classification criteria are not met.

### General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

### Inhalation
No specific symptoms known.

### Ingestion
May cause sensitisation or allergic reactions in sensitive individuals.

### Skin contact
May cause skin sensitisation or allergic reactions in sensitive individuals.

### Eye contact
No specific symptoms known.

### Route of exposure
Ingestion Inhalation Skin and/or eye contact

### Target organs
No specific target organs known.

### Medical considerations
Skin disorders and allergies.

### RTECS #
OS9275000

### SECTION 12: Ecological Information

#### Ecotoxicity
Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

##### 12.1. Toxicity

#### Acute aquatic toxicity

##### Acute toxicity - fish
LC₅₀, 96 hour: 102 mg/l, Pimephales promelas (Fat-head Minnow)

##### 12.2. Persistence and degradability
The degradability of the product is not known.

##### 12.3. Bioaccumulative potential
No data available on bioaccumulation.
Cineole

12.4. Mobility in soil
Mobility
No data available.

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment
This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects
Other adverse effects
None known.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
General information
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

SECTION 14: Transport information
14.1. UN number
UN No. (ADR/RID) 1993
UN No. (IMDG) 1993
UN No. (ICAO) 1993
UN No. (ADN) 1993

14.2. UN proper shipping name
Proper shipping name (ADR/RID) FLAMMABLE LIQUID, N.O.S. (Cineole)
Proper shipping name (IMDG) FLAMMABLE LIQUID, N.O.S. (Cineole)
Proper shipping name (ICAO) FLAMMABLE LIQUID, N.O.S. (Cineole)
Proper shipping name (ADN) FLAMMABLE LIQUID, N.O.S. (Cineole)

14.3. Transport hazard class(es)
ADR/RID class 3
ADR/RID classification code F1
ADR/RID label 3
IMDG class 3
ICAO class/division 3
ADN class 3
Transport labels

14.4. Packing group
Cineole

ADR/RID packing group  III
IMDG packing group  III
ADN packing group  III
ICAO packing group  III

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user
EmS  F-E, S-E
ADR transport category  3
Emergency Action Code  •3Y
Hazard Identification Number  (ADR/RID)  30
Tunnel restriction code  (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations  Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.


15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories
US - TSCA  Present.

SECTION 16: Other information
Cineole

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Training advice

Only trained personnel should use this material.

Revision date

09/11/2017

Revision

1

SDS number

144929

Hazard statements in full

H226 Flammable liquid and vapour.
H317 May cause an allergic skin reaction.