1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Decane

Product Number: ARCHIVE

Brand: Sigma-Aldrich

CAS-No.: 124-18-5

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

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich

3050 Spruce Street

SAINT LOUIS MO  63103 USA

Telephone: +1 800-325-5832

Fax: +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone #: +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 3), H226

Aspiration hazard (Category 1), H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

Precautionary statement(s)

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves/eye protection/face protection.

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Formula</th>
<th>Molecular weight</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C_{10}H_{22}</td>
<td>142.28 g/mol</td>
<td>124-18-5</td>
<td>204-686-4</td>
</tr>
</tbody>
</table>

Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane</td>
<td>Flam. Liq. 3; Asp. Tox. 1; H226, H304</td>
<td>90 - 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

**General advice**
Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

**If inhaled**
If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

**In case of skin contact**
If on skin, rinse well with water. If on clothes, remove clothes.

**In case of eye contact**
Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

**If swallowed**
Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

**Suitable extinguishing media**
Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical

**Unsuitable extinguishing media**
High volume water jet
5.2 Special hazards arising from the substance or mixture
Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of aerosol. Do not breathe vapours/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Store under inert gas. No decomposition if stored and applied as directed.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.
Hazardous components without workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection
Eye wash bottle with pure water Tightly fitting safety goggles
**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Body Protection**
Impervious clothing, Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Control of environmental exposure**
Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

a) **Appearance** Form: liquid, clear

b) **Odour** No data available
c) **Odour Threshold** No data available
d) **pH** No data available
e) **Melting point/freezing point** Melting point/range: -30 °C (-22 °F) - lit.
f) **Initial boiling point and boiling range** 174 °C (345 °F) - lit.
g) **Flash point** 57.4 °C (135.3 °F) - Pensky-Martens closed cup

h) **Evaporation rate** No data available

i) **Flammability (solid, gas)** No data available

j) **Upper/lower flammability or explosive limits**
   - Upper explosion limit: 2.6 %(V)
   - Lower explosion limit: 0.8 %(V)

k) **Vapour pressure** 5.1 hPa (3.8 mmHg) at 37.7 °C (99.9 °F)
   - 1.3 hPa (1.0 mmHg) at 16.5 °C (61.7 °F)
   - 1 hPa (1 mmHg) at 20 °C (68 °F)

l) **Vapour density** No data available

m) **Relative density** 0.73 g/cm3 at 25 °C (77 °F)

n) **Water solubility** No data available
9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
Hazardous decomposition products formed under fire conditions. - Carbon oxides
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male and female - > 5,000 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male - 8 h - > 1369 ppm
(OECD Test Guideline 403)

LC50 Inhalation - Rat - male and female - 4 h - > 5.6 mg/l
(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - > 5,000 mg/kg
(OECD Test Guideline 402)

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)
Respiratory or skin sensitisation
Maximisation Test - Guinea pig
Result: Does not cause skin sensitisation.
(OECD Test Guideline 406)

Germ cell mutagenicity
Ames test
S. typhimurium
Result: negative

Mutagenicity (micronucleus test)
Mouse - male and female
Result: negative

Carcinogenicity
IARC: 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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
Repeated dose Rat - male and female - Oral - NOAEL: > 5,000 mg/kg

RTECS: HD6550000
Acts as a simple asphyxiant by displacing air., anesthetic effects, Difficulty in breathing, Headache, Dizziness, Prolonged or repeated exposure to skin causes defatting and dermatitis., narcosis

Solvents may degrease the skin.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata - > 1,000 mg/l - 72 h
(OECD Test Guideline 201)

12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 83.2 % - Readily biodegradable.
(OECD Test Guideline 301F)
12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging
Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2247 Class: 3 Packing group: III
Proper shipping name: n-Decane
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG
UN number: 2247 Class: 3 Packing group: III EMS-No: F-E, S-E
Proper shipping name: n-DECANE

IATA
UN number: 2247 Class: 3 Packing group: III
Proper shipping name: n-Decane

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane</td>
<td>124-18-5</td>
<td>2007-03-01</td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decane</td>
<td>124-18-5</td>
<td>2007-03-01</td>
</tr>
</tbody>
</table>
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Asp. Tox.  Aspiration hazard
Flam. Liq.  Flammable liquids
H226      Flammable liquid and vapour.
H304      May be fatal if swallowed and enters airways.

HMIS Rating
Health hazard: 2
Chronic Health Hazard: *
Flammability: 2
Physical Hazard 0

NFPA Rating
Health hazard: 0
Fire Hazard: 2
Reactivity Hazard: 0

Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.10  Revision Date: 03/22/2017  Print Date: 08/07/2019