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

1.1 Product identifiers
   Product name: Hexane

   Product Number: 34484
   Brand: Fluka
   Index-No.: 601-037-00-0
   REACH No.: 01-2119480412-44-XXXX
   CAS-No.: 110-54-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
   Company: Sigma-Aldrich Chemie BV
   Stationsplein 4
   3331 LL ZWIJNDRECHT
   NETHERLANDS

   Telephone: +31 78-620-5411
   Fax: +31 78-620-5421
   E-mail address: eurtechserv@sial.com

1.4 Emergency telephone number
   Emergency Phone #: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

   Classification according to Regulation (EC) No 1272/2008
   Flammable liquids (Category 2), H225
   Skin irritation (Category 2), H315
   Reproductive toxicity (Category 2), H361f
   Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
   Specific target organ toxicity - repeated exposure (Category 2), H373
   Aspiration hazard (Category 1), H304
   Chronic aquatic toxicity (Category 2), H411

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

   Classification according to EU Directives 67/548/EEC or 1999/45/EC
   F Highly flammable R11
   R62
   Xn Harmful R48/20, R65
   Xi Irritant R38
   R67
   N Dangerous for the environment R51/53

   For the full text of the R-phrases mentioned in this Section, see Section 16.
2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word: Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 Avoid release to the environment.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P331 Do NOT induce vomiting.

Supplemental Hazard Statements: None

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

| Formula   | C₆H₁₄                  |
| Molecular weight | 86.18 g/mol         |
| CAS-No.    | 110-54-3              |
| EC-No.     | 203-777-6             |
| Index-No.  | 601-037-00-0          |
| Registration number | 01-2119480412-44-XXXX |

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>110-54-3</td>
<td>Flam. Liq. 2; Skin Irrit. 2; Repr. 2; STOT SE 3; STOT RE 2; Asp. Tox. 1; Aquatic Chronic 2; H225, H304, H315, H336, H361f, H373, H411</td>
</tr>
<tr>
<td>EC-No.</td>
<td>203-777-6</td>
<td>&lt;= 100%</td>
</tr>
<tr>
<td>Index-No.</td>
<td>601-037-00-0</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
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<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

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

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. 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 further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. 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.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,4 mm
Break through time: 480 min
Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,2 mm
Break through time: 59 min
Material tested: Dermatril® P (KCL 743 / Aldrich Z677388, 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.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air
respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   - Form: liquid
   - Colour: colourless
b) Odour
   - No data available
c) Odour Threshold
   - No data available
d) pH
   - 7,0
e) Melting point/freezing point
   - Melting point/range: -95 °C
f) Initial boiling point and boiling range
   - 69 °C
g) Flash point
   - -26,0 °C - 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: 7,7 %(V)
   - Lower explosion limit: 1,2 %(V)
k) Vapour pressure
   - 341,3 hPa at 37,7 °C
   - 176,0 hPa at 20,0 °C
l) Vapour density
   - No data available
m) Relative density
   - 0,659 g/mL at 25 °C
n) Water solubility
   - insoluble
o) Partition coefficient: n-octanol/water
   - log Pow: 3,90 - 4,11
p) Auto-ignition temperature
   - 234,0 °C
q) Decomposition temperature
   - No data available
r) Viscosity
   - No data available
s) Explosive properties
   - No data available
t) Oxidizing properties
   - No data available

9.2 Other safety information
   - No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
   - No data available

10.2 Chemical stability
   - Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
   - No data available
10.4 **Conditions to avoid**
Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5 **Incompatible materials**
Oxidizing agents

10.6 **Hazardous decomposition products**
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 **Information on toxicological effects**

**Acute toxicity**
LD50 Oral - Rat - 25.000 mg/kg
LC50 Inhalation - Rat - 4 h - 48000 ppm

**Skin corrosion/irritation**
Irritating to skin.

**Serious eye damage/eye irritation**
Eyes - Rabbit
Result: Mild eye irritation

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
No data available

**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.

**Reproductive toxicity**
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant Suspected of damaging fertility.

**Specific target organ toxicity - single exposure**
May cause drowsiness or dizziness.

**Specific target organ toxicity - repeated exposure**
Ingestion - May cause damage to organs through prolonged or repeated exposure. - Nervous system

**Aspiration hazard**
May be fatal if swallowed and enters airways.

**Additional Information**
RTECS: MN9275000
Prolonged or repeated contact with skin may cause: defatting, Dermatitis, Contact with eyes can cause: Redness, Blurred vision, Provokes tears., Effects due to ingestion may include: Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema, giddiness, slowed reaction time, slurred speech, Headache, Dizziness, Drowsiness, Unconsciousness

SECTION 12: Ecological information

12.1 **Toxicity**

**Toxicity to fish**
LC50 - Pimephales promelas (fathead minnow) - 2,5 mg/l - 96,0 h

**Toxicity to daphnia and other aquatic invertebrates**
EC50 - Daphnia magna (Water flea) - 3.878,00 mg/l - 48 h

**Toxicity to algae**
EC50 - Chlorella vulgaris (Fresh water algae) - 12.840,00 mg/l - 3 h
12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
Toxic to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1208  IMDG: 1208  IATA: 1208

14.2 UN proper shipping name
ADR/RID: HEXANES  IMDG: HEXANES  IATA: Hexanes

14.3 Transport hazard class(es)
ADR/RID: 3  IMDG: 3  IATA: 3

14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
ADR/RID: yes  IMDG Marine pollutant: yes  IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information
Full text of H-Statements referred to under sections 2 and 3.
Aquatic Chronic  Chronic aquatic toxicity
Asp. Tox. Aspiration hazard
Flam. Liq. Flammable liquids
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
Repr. Reproductive toxicity
Skin Irrit. Skin irritation
STOT RE Specific target organ toxicity - repeated exposure

Full text of R-phrases referred to under sections 2 and 3

F Highly flammable
N Dangerous for the environment
Xn Harmful
R11 Highly flammable.
R38 Irritating to skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.
R65 Harmful: may cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.
Repr.Cat.3 Toxic to Reproduction Category 3

Further information
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