



Preparing for the New Era of Laboratories

# MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

## **n-HEXANE 99% AR**

PRODUCT CODE : B-3059

CAS No : 110-54-3

FORMULA :  $C_6H_{14}$

UN No : 1208

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## n-HEXANE 99% AR



MSDS Number : 0240

Date : Aug 26<sup>th</sup>, 2024

Version : 1.0

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

- 1.1 Product Name** : n-HEXANE 99% AR  
**Synonyms** : Hexane, Sextane, N-HEXANE  
**CAS No.** : 110-54-3  
**HS Code** : 2901 29 90  
**Chemical Formula** :  $\text{CH}_3(\text{CH}_2)_4\text{CH}_3$   $\text{C}_6\text{H}_{14}$  Hill  
**Molecular Weight** : 86.18 g/mol  
**Product Code** : B-3059  
**Brand** : Labotiq  
**1.2 Manufacturer** : Labotiq  
**Address** : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111  
**Website** : [www.labotiq.net](http://www.labotiq.net)  
**Email** : [labotiq.id@gmail.com](mailto:labotiq.id@gmail.com)  
**For information** : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710  
**Emergency number** : +6281316894650  
**1.3 Application** : Laboratory chemicals, Manufacture of substances, General Chemical reagent

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

#### 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.

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## Precautionary statement(s)

P210

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

P261

Avoid breathing vapours.

P273

Avoid release to the environment.

P281

Use personal protective equipment as required.

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

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

Synonyms	: Hexane, Sextane, n-Hexane
Formula	: CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> CH <sub>3</sub> C <sub>6</sub> H <sub>14</sub> Hill
Molecular weight	: 86.18 g/mol
CAS-No.	: 110-54-3
EC-No.	: 203-777-6
Index-No.	: 601-037-00-0

### 3.2 Mixture

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

Component	Classification	Concentration
n-Hexane CAS-No. 110-54-3 EC-No. 203-777-6 Index-No 601-037-00-0	Flam. Liq. 2; Skin Irrit. 2; Repr. 2; STOT SE 3; STOT RE 2; Asp. Tox. 1; Aquatic Chronic 2; H225, H315, H361f, H336, H373, H304, H411 Concentration limits: >= 5 %: STOT RE 2, H373;	<=100 %

For the full text of the H-Statements 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

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**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**

Carbon dioxide (CO<sub>2</sub>) Foam Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

**5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**5.4 Further information**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains. Risk of explosion.

**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

#### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place.  
Keep away from heat and sources of ignition.

#### **Storage class**

Storage class (TRGS 510): 3: Flammable liquids

### **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**

### **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.

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**Full contact**

Material: Nitrile rubber  
 Minimum layer thickness: 0,4 mm  
 Break through time: 480 min  
 Material tested: Camatril®

**Splash contact**

Material: Nitrile rubber  
 Minimum layer thickness: 0,11 mm  
 Break through time: 10 min  
 Material tested: KCL 741 Dermatril® L

**Body Protection**

Flame retardant antistatic protective clothing.

**Respiratory protection**

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds  
 The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

### SECTION 9: Physical and chemical properties

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

Appearance	Form: liquid
	Colour: colourless
Odour	hydrocarbon-like
Odour Threshold	No data available
pH	7.0
Melting point/freezing point	Melting point/range: -95 °C
Initial boiling point and boiling range	69 °C
Flash point	-22 °C - c.c
Evaporation rate	15,8
Flammability (solid, gas)	No data available
Upper/lower flammability or	Upper explosion limit: 8,1 %(V)
	Lower explosion limit: 1,0 %(V)
explosive limits	No data available
Vapour pressure	175,98 hPa at 20,0 °C
Vapour density	No data available
Relative density	0,659 g/mL at 25 °C
Water solubility	0,01 g/l at 25 °C - slightly soluble
Partition coefficient: noctanol/water	log Pow: ca.4 at 20 °C - (Lit.), Potential bioaccumulation
Auto-ignition temperature	225 °C at 1.013 hPa
Decomposition temperature	No data available
Viscosity	Viscosity, dynamic: 0,3 mPa.s at 25 °C
Explosive properties	No data available
Oxidizing properties	none

**9.2 Other safety information**

No data available

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### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

Vapors may form explosive mixture with air.

#### **10.2 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

#### **10.3 Possibility of hazardous reactions**

Risk of explosion with: Strong oxidizing agents nitrogen oxides

Violent reactions possible with: halogens

Risk of ignition or formation of inflammable gases or vapours with: Peroxides (sodium salt)

#### **10.4 Conditions to avoid**

Warming.

#### **10.5 Incompatible materials**

rubber, various plastics

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

LD50 Oral - Rat - male and female - 16.000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 172 mg/l

Remarks: (RTECS)

LD50 Dermal - Rabbit - male - > 2.000 mg/kg (OECD Test Guideline 402)

Remarks: (ECHA)

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: Skin irritation - 24 h (OECD Test Guideline 404)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 72 h (OECD Test Guideline 405)

##### **Respiratory or skin sensitisation**

Local lymph node assay (LLNA) – Mouse

Result: negative (OECD Test Guideline 429)

##### **Germ cell mutagenicity**

No data available

Test Type: Ames test Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative Test Type: dominant lethal test Species: Mouse

Application Route: inhalation (vapor)

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Result: negative Remarks: (ECHA)

**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. Suspected of damaging fertility.

**Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness. - Central nervous system

Remarks: Classified according to Regulation

**Specific target organ toxicity - repeated exposure**

Inhalation - May cause damage to organs through prolonged or repeated exposure. - Nervous system

Remarks: Classified according to Regulation

**Aspiration hazard**

May be fatal if swallowed and enters airways.

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

**Additional Information**

Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 6,6 mg/kg

Remarks: (ECHA)

RTECS: MN9275000

Drowsiness, irritant effects, somnolence narcosis, Nausea, Tiredness, CNS disorders, paralysis symptoms Risk of corneal clouding. It generally applies for aliphatic hydrocarbons with 6 - 18 carbon atoms that they may cause pneumonia, in some cases also pulmonary oedema, upon direct inhalation, i.e. in conditions that can occur only in very special circumstances (nebulizations, spraying, inhalation of aerosols and similar). After absorption of very large quantities: narcosis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish

LC50 - Pimephales promelas (fathead minnow) - 2,5 mg/l - 96 h

Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 2,1 mg/l - 48 h

Remarks: (Lit.)

**12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d

Result: 98 % - Readily biodegradable. (OECD Test Guideline 301F)

Remarks: (in analogy to similar products)

**12.3 Bioaccumulative potential**

No data available



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**12.4 Mobility in soil**

No data available(n-Hexane)

**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**

No data available

### SECTION 13: Disposal considerations

**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b 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: N-HEXANE

IMDG: N-HEXANE

IATA: N-HEXANE

**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****Further information**

No data available

### SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**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.**

H225 Highly flammable liquid and vapour.

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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.

**National Fire Protection Association (U.S.A.):**

Health: 2

Flammability: 3

Reactivity: 0

**Further information**

*The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.*

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