



Preparing for the New Era of Laboratories

# MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

## **n-HEPTANE 99% AR**

PRODUCT CODE : B-3057

CAS No : 142-82-5

FORMULA :  $C_7H_{16}$

UN No : 1206

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## n-HEPTANE 99% AR



MSDS Number : 0238

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-HEPTANE 99% AR  
**Synonyms** : Dipropyl methane; Heptyl hydride ; Heptane, Septane  
**CAS No.** : 142-82-5  
**HS Code** : 2901 29 90  
**Chemical Formula** :  $\text{CH}_3(\text{CH}_2)_5\text{CH}_3$  C<sub>7</sub>H<sub>16</sub> Hill  
**Molecular Weight** : 100.21 g/mol  
**Product Code** : B-3057  
**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

##### Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

Skin irritation (Category 2), H315

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

Aspiration hazard (Category 1), H304

Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1), H410

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.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261

Avoid breathing vapours.

P273

Avoid release to the environment.

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P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331

Do NOT induce vomiting. P501 Dispose of contents/ container to an approved waste disposal plant.

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	: Dipropyl methane; Heptyl hydride ; Heptane, Septane
Formula	: CH <sub>3</sub> (CH <sub>2</sub> ) <sub>5</sub> CH <sub>3</sub> C <sub>7</sub> H <sub>16</sub> Hill
Molecular weight	: 100.21 g/mol
CAS-No.	: 142-82-5
EC-No.	: 205-563-8
Index-No.	: 601-008-00-2

### 3.2 Mixture

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

Component	Classification	Concentration
Heptane CAS-No. 142-82-5 EC-No. 205-563-8 Index-No. 601-008-00-2	Flam. Liq. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H225, H315, H336, H304, H400, H410 M-Factor - Aquatic Acute: 10	<=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

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution

#### If swallowed

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

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### **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

Flash back possible over considerable distance.

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**

In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. 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. Chemisorb®). Dispose of properly. Clean up affected area.

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

For disposal see section 13.

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### **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**

Store under inert gas. 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.

##### **Full contact**

Material: Nitrile rubber

Minimum layer thickness: 0,2 mm

Break through time: 60 min

Material tested: Dermatrill® P

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**Splash contact**

Material: Nitrile rubber  
 Minimum layer thickness: 0.11 mm  
 Break through time: 480 min  
 Material tested: Dermatrill® (KCL 740, Size M)

**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	characteristic
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	Melting point/range: -91 °C
Initial boiling point and boiling range	98 °C
Flash point	-4.0 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or	Upper explosion limit: 7%(V)
	Lower explosion limit: 1.1 %(V)
explosive limits	No data available
Vapour pressure	83.0 mmHg at 37.7 °C
	40.0 mmHg at 20.0 °C
Vapour density	No data available
Relative density	0.684 g/mL at 25 °C
Water solubility	insoluble
Partition coefficient: octanol/water	log Pow: > 3.000
Auto-ignition temperature	223.0 °C
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

**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 ignition or formation of inflammable gases or vapours with: Strong oxidizing agents  
phosphorus in the presence of: Chlorine

#### 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 - > 5.000 mg/kg (OECD Test Guideline 401)

Remarks: (in analogy to similar compounds) The value is given in analogy to the following substances: isooctane

LC50 Inhalation - Rat - male and female - 4 h - > 29,29 mg/l (OECD Test Guideline 403)

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

Remarks: The value is given in analogy to the following substances: isooctane

##### Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 24 h (OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: isooctane Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

##### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances: isooctane

##### Respiratory or skin sensitisation

Maximization Test - Guinea pig

Result: negative (OECD Test Guideline 406)

##### Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

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Test Type: Chromosome aberration test in vitro Test system: rat hepatocytes

Method: OECD Test Guideline 473

Result: negative

**Carcinogenicity**

This product is or contains a component that is not classifiable as to its classification. (Heptane) (Heptane)

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**

No data available

**Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness.

Remarks: Classified according to Regulation

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

May be fatal if swallowed and enters airways.

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

**Additional Information**

RTECS: MI7700000

Prolonged or repeated exposure to skin causes defatting and dermatitis., Central nervous system depression, narcosis, Damage to the lungs. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence

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

LC50 - Carassius auratus (goldfish) - 4 mg/l - 24.0 h (Heptane)

LC50 - Tilapia mossambica - 375 mg/l - 96.0 h (Heptane)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 - Daphnia magna (Water flea) - 1.50 mg/l - 48 h (Heptane)

**12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 10 d

Result: 70 % - Readily biodegradable.

Remarks: (ECHA)

Biochemical Oxygen Demand (BOD) 1.920 mg/g

Remarks: (IUCLID)

Theoretical oxygen demand 3.500 mg/g

Remarks: (Lit.) Ratio BOD/ThBOD 55 % Remarks: (Lit.)

**12.3 Bioaccumulative potential**

Indication of bioaccumulation.

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**12.4 Mobility in soil**

No data available(Heptane)

**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**

Additional ecological information

Do not empty into drains. Avoid release to the environment.

### 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: 1206

IMDG: 1206

IATA: 1206

**14.2 UN proper shipping name**

ADR/RID: HEPTANES

IMDG: HEPTANES

IATA: Heptanes

**14.3 Transport hazard class(es)**

ADR/RID: 3

IMDG: 3

IATA: 3

**14.4 Packaging group I**

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

**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

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### **SECTION 16: Other information**

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

- H225 Highly flammable liquid and vapor.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

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

Health: 1

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.*

Version : 1.0

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