
Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:**Product Description:** n-Hexane**Synonyms:** Hexane**CAS-No:** 110-54-3**EC-No.:** 203-777-6**Molecular Formula:** C₆H₁₄

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

1.2. Relevant identified uses of the substance or mixture and uses advised against:**Recommended Use:** For analysis, manufacture of substances**1.3. Details of the supplier of the safety data sheet:**

- **Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad,
Email: info@finarchemicals.com
Web: www.finarchemicals.com
- **E-Mail Address** safety@finarchemicals.com; info@finarchemicals.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717
- Registered office No: +91 - 79 - 40040085

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture:****Classification according to Regulation (EC) No 1272/2008**

Flammable liquid, Category 2, H225

Skin irritation, Category 2, H315

Reproductive toxicity, Category 2, H361fd

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

Specific target organ toxicity - repeated exposure, Category 2, Inhalation, Nervous system, 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:**Labeling 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)**Prevention**

P201 Obtain special instructions before use.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground/bond container and receiving equipment.

P273 Avoid release to the environment.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P314 Get medical advice/ attention if you feel unwell.

P331 Do NOT induce vomiting.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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: n-Hexane

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
n-Hexane	110-54-3	203-777-6	>95

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

If symptoms persist, call a physician.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

- **If inhaled**

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Risk of serious damage to the lungs (by aspiration).

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

- **If swallowed**

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control centre immediately. If vomiting occurs naturally, have victim lean forward.

4.2. Most important symptoms and effects, both acute and delayed:

irritant effects, somnolence, Drowsiness

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 (nebulization's, spraying, inhalation of aerosols and similar).

After absorption of very large quantities: narcosis.

4.3. Indication of any immediate medical attention and special treatment needed:

No information available.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use alcohol-resistant foam, dry chemical or carbon dioxide.

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

5.2. Special hazards arising from the substance or mixture:

Combustible.

Forms explosive mixtures with air at ambient temperatures.

Vapours are heavier than air and may spread along floors.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

Pay attention to flashback.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3. Advice for firefighters:

Special protective equipment for fire-fighters

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 vapours, 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.

Advice for emergency responders: Protective equipment see section 8.

6.2. Environmental precautions:

Do not let product enter drains. Risk of explosion.

6.3. Methods and material 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 Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Take precautionary measures against static discharges.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

7.2. Conditions for safe storage, including any incompatibilities:

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.

Keep away from heat, sparks and flame. Flammables area.

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:**

Contains no substances with occupational exposure limit values.

8.2. Exposure Controls:**Appropriate Engineering Controls:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- Eye & Face Protection-

Safety Goggles

- Other Protective equipment-

Flame retardant antistatic protective clothing.

- Respiratory Protection-

Required when vapours/aerosols are generated.

Recommended Filter type: Canister mask required.

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.

- Environmental Exposure Controls-

Do not let product enter drains. Risk of explosion.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties:**

- **Appearance:** Colorless
- **Physical State:** Liquid
- **Odor:** Petroleum distillates
- **Odor Threshold:** No data available
- **pH:** No data available
- **Melting Point:** -95°C
- **Critical Temperature:** No data available
- **Vapor Pressure:** 160 mbar at 20 °C
- **Vapor Density:** 2.97 (Air = 1.0)
- **Density:** 0.68 g/cm³ at 20 °C
- **Auto-Ignition Temperature:** 223°C
- **Minimum Ignition Energy:** 0.24 mJ
- **Volatility:** No data available
- **Bulk Density:** No data available
- **Evaporation Rate:** No data available
- **Viscosity:** 0.31 mPa s at 20 °C
- **Water/Oil Dist. Co eff.:** No data available
- **Ionicity (in Water):** No data available
- **Partition Co-efficient: n-octanol/Water:** log Pow: 4.11 (Calculated) (Lit.) Potential Bioaccumulation
- **Lower Explosion Limit:** 1.2% (V)
- **Upper Explosion Limit:** 7.5% (V)
- **Boiling Point/Range:** 69°C
- **Flash Point:** -22°C
- **Specific Gravity:** 0.659
- **Water Solubility:** Insoluble in water

9.2. Other information:**Molecular Formula:** C₆H₁₄**Molecular Weight:** 86.18 g/mol

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity: -**

Vapours 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: SODIUM PEROXIDE

10.4. Conditions to avoid:

Incompatible products. Heat, flames and sparks. Exposure to light. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials:

Strong oxidizing agents, Halogens

10.6. Hazardous decomposition products:

Carbon monoxide (CO), Carbon dioxide (CO₂)

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute Oral toxicity**

LD50 Rat: 16,000 mg/kg

OECD Test Guideline 401

Symptoms: Nausea

Acute Inhalation toxicity

LC50 Rat: 172 mg/l; 4 h; vapour

(RTECS)

Symptoms: Irritation symptoms in the respiratory tract.

Acute Dermal toxicity

LD50 Rabbit: > 2,000 mg/kg

(ECHA)

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

absorption

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Risk of corneal clouding.

Respiratory or skin sensitization

No Data Available

Germ cell mutagenicity

Genotoxicity in vivo

Micronucleus test

Result: negative

(National Toxicology Program)

Genotoxicity in vitro

In vitro mammalian cell gene mutation test

Mouse lymphoma test

Result: Positive results were obtained in some in vitro tests.

Method: OECD Test Guideline 476

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

Carcinogenicity

No Data Available

Reproductive toxicity

No Data Available

Teratogenicity

No Data Available

CMR effects

Teratogenicity:

Suspected of damaging the unborn child.

Reproductive toxicity:

Suspected of damaging fertility.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Target Organs: Central nervous system

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Exposure routes: Inhalation

Target Organs: Nervous system

Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

11.2 Further Information:

After absorption:

Tiredness, narcosis

After long-term exposure to the chemical:

CNS disorders, paralysis symptoms

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.

Other dangerous properties cannot be excluded.

This substance should be handled with particular care.

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity:****Toxicity to fish**

LC50 Pimephales promelas (fathead minnow): 2.5 mg/l; 96 h

(ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia magna (Water flea): 2.1 mg/l; 48 h

(Lit.)

12.2 Persistence and degradability:

Biodegradability

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

aerobic - Exposure time 28 d

Result: 98 % - Readily biodegradable.

(OECD Test Guideline 301F)

Remarks: (in analogy to similar products)

12.3 Bioaccumulate potential:

Partition Coefficient: - n-Octanol/water

Log Pow: 4.11

(Calculated)

(Lit.) Potential Bioaccumulation

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects:

Henry constant

183000 Pa*m³/mol

(HSDB) Distribution preferentially in air.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations**13.1 Waste treatment methods:**

Waste material must be disposed of in accordance with the national and local regulations.

Leave chemicals in original containers. No mixing with other waste. Handle un cleaned containers like the product itself.

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	-----------------

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	UN 1208		
14.2 Proper shipping name	HEXANES		
14.3 Class	3		
14.4 Packing group	II		
14.5 Environmentally hazardous	YES	YES	YES
14.6 Special precautions for user	YES Tunnel Restriction code – D/E	No	Yes EmS F-E S-D
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
Not Relevant			

SECTION 15: Regulatory information

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

National Legislation

Storage class 3

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Training advice

Provide adequate information, instruction and training for operators.

Created: 28/11/2020

Material Safety Data Sheet

Product Name	<u>n-Hexane</u>
---------------------	------------------------

Disclaimer:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Finar Limited be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Finar Limited has been advised of the possibility of such damages.