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**Material Safety Data Sheet**

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<b>Product Name</b>	<b><u>n-Heptane</u></b>
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**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identification:****Product Description:** n-Heptane**Synonyms:** Heptane**CAS-No:** 142-82-5**EC-No.:** 205-563-8**Molecular Formula:** C<sub>7</sub>H<sub>16</sub>

**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:** Adhesives, paint thinner, gas chromatography analysis other lab purpose**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](mailto:info@finarchemicals.com)  
Web: [www.finarchemicals.com](http://www.finarchemicals.com)
- **E-Mail Address** [safety@finarchemicals.com](mailto:safety@finarchemicals.com); [info@finarchemicals.com](mailto:info@finarchemicals.com)

**1.4. Emergency Telephone Number:**

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

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**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

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:****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.

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects.

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**Precautionary statement(s)****Prevention**

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

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P243 Take precautionary measures against static discharge.

P260 Do not breathe gas/mist/vapors/spray.

P261 Avoid breathing gas/mist/vapors/spray.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

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

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

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.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P321 Specific treatment.

P331 Do NOT induce vomiting.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section SDS 5).

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P391 Collect spillage

### Storage

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

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

### 2.3. Other Hazards:

NFPA grade (0 ~ 4 level) : Health : 2 , Flammability : 3, Reactivity : 0

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

3.1. **Substances:** n-Heptane

3.2. **Mixtures:**

Component	CAS-No	EC-No.	Weight %
n-Heptane	142-82-5	205-563-8	>99

## **SECTION 4: FIRST AID MEASURES**

4.1. **Description of first aid measures:**

- **General advice**

First aider needs to protect himself.

- **If inhaled**

Fresh air. Call in physician.

- **If Contact with skin**

Take off immediately all contaminated clothing. Rinse skin with water/ shower.

- **In case of eye contact**

Rinse out with plenty of water. Remove contact lenses.

- **If swallowed**

Caution if victim vomits. Risk of aspiration! Keep airways free. Call a physician immediately.

Pulmonary failure possible after aspiration of vomit.

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

Irritant effects, Drowsiness, Unconsciousness, narcosis, Headache, somnolence, Vertigo, death

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**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.

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:**

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Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

**6.4. Reference to other sections:**

For disposal, see Sections 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Do not handle until all safety precautions have been read and understood. Handle it outdoors or in a well-ventilated area. Do not expose, cut, expose, weld, solder, bond, punch, grind or expose to heat, flames, sparks, static electricity or other sources of ignition. Follow all SDS / warning label precautions, as product residues may remain even after emptying containers. Carefully open the cap before opening.

Be sure to ground all equipment when handling material.

**7.2. Conditions for safe storage, including any incompatibilities:**

Keep away from heat / sparks / open flames / hot surfaces. No smoking. Keep container tightly closed in a well-ventilated place. Avoid direct sunlight. The empty drum should be completely drained, properly blocked and immediately returned to the drum regulator or placed properly.

The container may be pressurized if exposed to heat.

**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:**

A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source

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**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-**

Wear primary eye protection such as splash resistant safety goggles with a secondary protection Face shield.

**- Hand Protection -**

Wear appropriate chemical resistant glove.

**- Other Protective equipment-**

Flame retardant antistatic protective clothing.

**- Respiratory Protection-**

A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

**- Environmental Exposure Controls-**

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:** Colorless
- **Physical State:** Liquid
- **Odour:** Characteristic gasoline type
- **Odour Threshold:** No data available
- **pH:** No data available
- **Melting Point:** -91 °C
- **Critical Temperature:** - No data available
- **Vapor Pressure:** 4.6 kPa at 20 °C
- **Relative Vapor Density:** 3.46
- **Density:** 0.68 g/cm<sup>3</sup> at 20 °C

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- **Ignition Temperature:** 215°C
- **Minimum Ignition Energy:** 0.24 mJ
- **Volatility:** No data available
- **Bulk Density:** No data available
- **Evaporation Rate:** 2.8 (Butyl Acetate = 1.0)
- **Viscosity, dynamic:** 0.42 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: 4.66 (Experimental) (Lit.) Potential Bioaccumulation
- **Lower Explosion Limit:** 1 % (V)
- **Upper Explosion Limit:** 7 % (V)
- **Boiling Point/Range:** 97° C to 98°C
- **Flash Point:** -4°C
- **Specific Gravity:** 0.683
- **Water Solubility:** 0.05 g/l at 20°C

**9.2. Other information:****Molecular Formula:** C<sub>7</sub>H<sub>16</sub>**Molecular Weight:** 100.21 g/mo**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 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:** - No data available



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## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Acute Oral toxicity**

LD50 Rat: > 5,000 mg/kg

OECD Test Guideline 401

Symptoms: Irritation of mucous membranes

#### **Acute Inhalation toxicity**

LC50 Rat: > 29.3 g/m<sup>3</sup>; 4 h; vapour

OECD Test Guideline 403.

Symptoms: Irritation symptoms in the respiratory tract.

#### **Acute Dermal toxicity**

LD50 Rabbit: > 2,000 mg/kg

OECD Test Guideline 402

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

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Causes skin irritation.

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

Rabbit

Result: No Eye irritation

(ECHA)

#### **Respiratory or skin sensitization**

No Data Available

#### **Germ cell mutagenicity**

Genotoxicity in vivo

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

#### **Carcinogenicity**

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No Data Available

**Reproductive toxicity**

No Data Available

**Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness.

Target Organs: Central nervous system

**Specific target organ toxicity - repeated exposure**

No Data Available.

**Aspiration hazard**

Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

**11.2 Further Information:**

After uptake of large quantities: Headache, Vertigo, Unconsciousness, Narcosis, Death

It generally applies for aliphatic hydrocarbon with 6-18 carbon atom that they may cause pneumonia, in some case also pulmonary oedema, upon direct inhalation, i.e. in conditions that can occur only in very special circumstances (nebulization, spraying, inhalation of aerosols and similar). After absorption of very large quantities: narcosis.

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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

Toxicity to fish

LC50 Carassius auratus (goldfish): 4 mg/l; 24 h

ASTM D1345

(Lit.)

**12.2 Persistence and degradability:**

Biodegradability

70%; 10 d; aerobic

(ECHA)

Readily biodegradable

Biochemical Oxygen Demand (BOD)

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1,920 mg/g (5 d)

(IUCLID)

Theoretical oxygen demand (ThOD)

3,500 mg/g

(Lit.)

Ratio BOD/ThBOD

BOD<sub>5</sub> 55 %

(Lit.)

**12.3 Bioaccumulate potential:**

Partition Coefficient: - n-Octanol/water

Log Pow: 4.66

(experimental)

(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

208678 Pa\*m<sup>3</sup>/mol

Method: (calculated)

(Lit.) 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.

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### SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	UN 1206		
14.2 Proper shipping name	HEPTANES		
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

#### Information on EU classification:

Classification - [n-Heptane] : F; R11Xn; R65Xi; R38R67N; R50-53

Risk Phrases - [n-Heptane] : R11, R38, R65, R67, R50/53

Safety Phrase - [n-Heptane] : S2, S9, S16, S29, S33, S60, S61, S62

#### 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.

H304 May be fatal if swallowed and enter airways

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- 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

**Training advice**

Provide adequate information, instruction and training for operators.

**Labelling**

**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)**

**Prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. 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.
- P313 Get medical advice/attention

**Storage**

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

**References:** EU regulation 1272/2008

**Created:** 15/06/2020

**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.