

# Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: July 17, 2020

## 1 Identification

- **Product identifier**
- **Trade name:** Heptane
- **Product code:** HP1350
- **CAS Number:**  
142-82-5
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
AquaPhoenix Scientific, Inc.  
860 Gitts Run Road  
Hanover, PA 17331 USA  
Tel +1 (717)632-1291  
Toll-Free: (866)632-1291  
info@aquaphoenixsci.com
- **Distributor:**  
AquaPhoenix Scientific  
860 Gitts Run Road,  
Hanover, PA 17331  
(717) 632-1291
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Flam. Liq. 2 H225 Highly flammable liquid and vapor.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2B H320 Causes eye irritation.  
STOT SE 3 H336 May cause drowsiness or dizziness.  
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**  


GHS02 GHS07 GHS08
- **Signal word:** Danger
- **Hazard statements:**  
H225 Highly flammable liquid and vapor.  
H315+H320 Causes skin and eye irritation.

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H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

**Precautionary statements:**

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing mist, vapors, or spray.

P264 Wash thoroughly after handling.

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

P280 Wear protective gloves/protective clothing/eye protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P331 Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep 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/doctor if you feel unwell.

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

P362+P364 Take off contaminated clothing and wash it before reuse.

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

P370+P378 In case of fire: Use foam, powder, or carbon dioxide for extinction.

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards** There are no other hazards not otherwise classified that have been identified.

## 3 Composition/information on ingredients

**Chemical characterization: Substances**

**CAS No. Description**

142-82-5 Heptane

## 4 First-aid measures

**Description of first aid measures**

**General information:**

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

**After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

If experiencing respiratory symptoms: Call a poison center/doctor.

In case of unconsciousness place patient stably in side position for transportation.

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- **After skin contact:**  
Wash with soap and water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.  
A person vomiting while lying on their back should be turned onto their side.
- **Most important symptoms and effects, both acute and delayed:**  
Breathing difficulty  
Dizziness  
Coughing  
Causes eye irritation.  
Causes skin irritation.  
Gastric or intestinal disorders  
Disorientation
- **Danger:**  
Danger of impaired breathing.  
May be fatal if swallowed and enters airways.  
May cause drowsiness or dizziness.
- **Indication of any immediate medical attention and special treatment needed:**  
If swallowed or in case of vomiting, danger of entering the lungs.  
If necessary oxygen respiration treatment.  
Later observation for pneumonia and pulmonary edema.  
If medical advice is needed, have product container or label at hand.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Carbon dioxide  
Gaseous extinguishing agents  
Foam  
Fire-extinguishing powder  
Water fog / haze
- **For safety reasons unsuitable extinguishing agents:**  
Water stream.  
Water spray
- **Special hazards arising from the substance or mixture**  
Highly flammable liquid and vapor.  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information:** Eliminate all ignition sources if safe to do so.

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## 6 Accidental release measures

### · Personal precautions, protective equipment and emergency procedures

Isolate area and prevent access.

Ensure adequate ventilation.

Keep away from ignition sources.

Protect from heat.

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

### · Environmental precautions Do not allow to enter sewers/ surface or ground water.

### · Methods and material for containment and cleaning up

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

Send for recovery or disposal in suitable receptacles.

### · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### · Handling

#### · Precautions for safe handling:

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

#### · Information about protection against explosions and fires:

Highly flammable liquid and vapor.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Flammable gas-air mixtures may be formed in empty containers/receptacles.

#### · Conditions for safe storage, including any incompatibilities

#### · Requirements to be met by storerooms and receptacles:

Store in a cool location.

Avoid storage near extreme heat, ignition sources or open flame.

#### · Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidizing agents.

#### · Further information about storage conditions:

Keep containers tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

#### · Specific end use(s) No relevant information available.

## 8 Exposure controls/personal protection

### · Control parameters

### · Components with limit values that require monitoring at the workplace:

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## 142-82-5 Heptane

PEL (USA)	Long-term value: 2000 mg/m <sup>3</sup> , 500 ppm
REL (USA)	Long-term value: 350 mg/m <sup>3</sup> , 85 ppm Ceiling limit value: 1800* mg/m <sup>3</sup> , 440* ppm *15-min
TLV (USA)	Short-term value: 2050 mg/m <sup>3</sup> , 500 ppm Long-term value: 1640 mg/m <sup>3</sup> , 400 ppm
EL (Canada)	Short-term value: 500 ppm Long-term value: 400 ppm
EV (Canada)	Short-term value: 2045 mg/m <sup>3</sup> , 500 ppm Long-term value: 1635 mg/m <sup>3</sup> , 400 ppm
LMPE (Mexico)	Short-term value: 500 ppm Long-term value: 400 ppm

- **Exposure controls**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

- **Engineering controls:** Provide adequate ventilation.

- **Breathing equipment:**

Use suitable respiratory protective device when high concentrations are present.

NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

- **Protection of hands:**



Protective gloves

- **Material of gloves**

Laminated film gloves.

PVA gloves

Fluorocarbon rubber (Viton)

- **Not suitable are gloves made of the following materials:**

Butyl rubber, BR

PVC or PE gloves

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Solvent resistant protective clothing

- **Limitation and supervision of exposure into the environment**

No relevant information available.

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## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · Appearance:

· Form:	Liquid
· Color:	Colorless
· Odor:	Characteristic
· Odor threshold:	Not determined.

· pH-value:	Not determined.
· Melting point/Melting range:	-90.5 °C (-130.9 °F)
· Boiling point/Boiling range:	98 °C (208.4 °F)

· Flash point:	-4 °C (24.8 °F)
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· Flammability (solid, gaseous):	Not applicable.
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· Auto-ignition temperature:	215 °C (419 °F)
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· Decomposition temperature:	Not determined.
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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
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#### · Explosion limits

· Lower:	1.1 Vol %
· Upper:	6.7 Vol %

· Oxidizing properties:	Non-oxidizing.
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· Vapor pressure at 20 °C (68 °F):	48 hPa (36 mm Hg)
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· Density at 20 °C (68 °F):	0.68 g/cm <sup>3</sup> (5.67 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.

· Solubility in / Miscibility with Water at 20 °C (68 °F):	0.05 g/l
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· Partition coefficient (n-octanol/water):	Not determined.
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#### · Viscosity

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Other information	No relevant information available.
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## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**  
Reacts violently with oxidizing agents.

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Used empty containers may contain product gases which form explosive mixtures with air.  
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.  
Highly flammable liquid and vapor.

· **Conditions to avoid**

Keep ignition sources away - Do not smoke.  
Store away from oxidizing agents.

· **Incompatible materials** Oxidizing agents.

· **Hazardous decomposition products** Carbon monoxide and carbon dioxide

## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

**142-82-5 Heptane**

Oral	LD50	>5000 mg/kg (rat) (Estimate)
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· **Primary irritant effect:**

· **On the skin:** Irritant to skin and mucous membranes.

· **On the eye:** Causes eye irritation.

· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **NTP (National Toxicology Program):**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

· **Probable route(s) of exposure:**

Ingestion.

Inhalation.

Eye contact.

Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

Irritating to eyes and skin.

May be fatal if swallowed and enters airways.

Vapors have narcotic effect.

· **Repeated dose toxicity:** No relevant information available.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** May cause drowsiness or dizziness.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

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

## 12 Ecological information

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- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**  
Do not allow product to reach ground water, water course or sewage system.  
Very toxic for aquatic organisms
- **Other adverse effects** No relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                       |   |
|---------------------------------------|---|
| · <b>UN-Number</b>                    |   |
| · <b>DOT, ADR/RID/ADN, IMDG, IATA</b> | UN1206  |
| · <b>UN proper shipping name</b>      |   |
| · <b>DOT, IMDG, IATA</b>              | HEPTANES  |
| · <b>ADR/RID/ADN</b>                  | 1206 HEPTANE  |
| · <b>Transport hazard class(es)</b>   |   |
| · <b>DOT</b>                          |   |
|                                       |    |
| · <b>Class</b>                        | 3   |
| · <b>Label</b>                        | 3   |
| -----                                 |   |
| · <b>ADR/RID/ADN</b>                  |   |
|                                       |   |
| · <b>Class</b>                        | 3 (F1)  |
| · <b>Label</b>                        | 3   |

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· **IMDG**



· **Class** 3  
 · **Label** 3

· **IATA**



· **Class** 3  
 · **Label** 3

· **Packing group**

· **DOT, ADR/RID/ADN, IMDG, IATA** II

· **Environmental hazards**

· **Marine pollutant:** Symbol (fish and tree)

· **Special precautions for user**

Warning: Flammable liquids

· **Hazard identification number (Kemler code):** 33

· **EMS Number:** F-E,S-D

· **Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code** Not applicable.

## 15 Regulatory information

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

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

ACTIVE

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

Substance is not listed.

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· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

D

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **Canadian Domestic Substances List (DSL):**

Substance is not listed.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Asp. Tox. 1: Aspiration hazard – Category 1

· **Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sor\\_internet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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