



# High Purity Heptane Pure Grade

09/13/2021

## 1. IDENTIFICATION

**A. Product name:**

High Purity Heptane Pure Grade

**B. Recommended use of the chemical and restrictions on use:**

- Industrial Solvent

**C. Information of manufacturer, supplier:**

Company: Solvent Direct, Inc

Address: 2711 N Sepulveda Blvd.,  
#237  
Manhattan Beach, CA 90266

Emergency Telephone No: 1-833-PURE-GAS  
WWW.SOLVENTDIRECT.COM

HAZARD IDENTIFICATION

**D. Classification:**

Flammable liquids : 2  
Skin corrosion/irritation : 2  
Specific target organ toxicity(single exposure) : 3  
Specific target organ toxicity(repeated exposure) : 2  
Aspiration hazard : 1  
Hazardous to the Aquatic Environment–Acute hazard : 1  
Hazardous to the Aquatic Environment–Chronic hazard : 1

**B. Label element, including precautionary statements:**

Symbols:



Signal word(s):

Danger

Hazard statement(s):

- H225: Highly flammable liquid and vapour
- H304: May be fatal if swallowed and enters airways
- H315: Causes skin irritation
- H335: May cause respiratory irritation; or H:336 May cause drowsiness and dizziness
- H373: May cause damage to organs through prolonged or repeated exposure. Central Nervous system, Ear
- H400: Very toxic to aquatic life
- 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.
- 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.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264: Wash skin thoroughly after handling.
- P271: Use only outdoors or in a well–ventilated area.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

### Response

- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- 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.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P314: Get medical advice/attention if you feel unwell.
- P321: Specific treatment (see details on label).
- P331: Do NOT induce vomiting.
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P370+P378: Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish.
- 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.

### Disposal

- P501: Dispose of contents/container to (in accordance with local/regional/national/international regulation).

## C. Other hazards which do not result in classification:

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

## D. Classification of the substance or mixture

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical identity	Common name, synonym	CAS number	Percentages(%)
n-Heptane	Dipropyl methane Heptyl hydride	142-82-5	99 - 100

The Others

#### 4. FIRST AID MEASURES

##### A. Eye contact:

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

##### B. Skin contact:

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Wash thoroughly after handling.

##### C. Inhalation:

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.

##### D. Ingestion:

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.
- If swallowed, large amounts of water to drink and do not induce vomiting.

##### E. Most important symptoms/effect, acute and delayed:

- Not available

##### F. Indication of immediate medical attention and special treatment needed, if necessary:

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

#### 5. FIRE-FIGHTING MEASURES

##### A. Suitable extinguishing media:

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

##### B. Specific hazards arising from the chemical:

- Not available

## C. Special protective equipment and precautions for firefighters:

- Move containers from fire area, if you can do without the risk.
- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Do not access if the tank on fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.
- Due to the extremely low flash point, irrigating fire extinguishing may be less effective when put out a fire.

## 6. ACCIDENTAL RELEASE MEASURES

### A. Personal precautions, protective equipment and emergency procedures:

- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.

### B. Environmental precautions:

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities

### C. Methods and materials for containment and cleaning up:

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Avoid entering to sewers or water system.
- Do not use plastic containers.
- Prevent the influx to waterways, sewers, basements or confined spaces

## 7. HANDLING AND STORAGE

### A. Precautions for safe handling:

- Avoid direct physical contact.
- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources

### B. Conditions for safe storage, including incompatibilities:

- Save in cool, dry and well ventilated place.
- Check regularly for leaks.
- Keep sealed when not in use.
- No open fire.

- Prevent static electricity and keep away from combustible materials or heat sources.
- Collected them in sealed containers.
- Store away from water and sewer.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### A. Exposure limits in the air of the workplace, biological limit values:

- ACGIH TLV
  - [n-Heptane] : TWA, 400 ppm (1640 mg/m<sup>3</sup>) STEL, 500 ppm (2050 mg/m<sup>3</sup>)
- OSHA PEL
  - [n-Heptane]:500ppm 2000mg/m<sup>3</sup>

### B. 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.

### C. Individual protection measures:

#### Respiratory protection:

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

#### Eye protection:

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area

#### Hand protection:

- Wear appropriate chemical resistant glove.

#### Body protection:

- Wear appropriate chemical resistant protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### A. Appearance (physical state, colour etc):

Clear colorless Liquid

### B. Odour:

Mild Petroleum odour

C. Odour threshold:

Not available.

D. pH:

Not applicable

E. Melting point/freezing point:

-91 °C

F. Initial boiling point and boiling range:

97~98 °C

G. Flash point:

-4 °C

H. Evaporation rate:

40 (n-BuAc=100)

I. Flammability(solid, gas) :

Not applicable

J. Upper/lower flammability or explosive limits:

1.1 ~ 6.7% (Vol)

K. Vapour pressure:

40mmHg 20 °C

L. Solubility(ies):

Water solubility: below 0.01 wt%

M. Vapour density:

3.45

N. Specific gravity:

0.70

O. Partition coefficient: n-octanol/water:

4.66

P. Auto-ignition temperature:

285 °C

**Q. Decomposition temperature:**

Not available.

**R. Viscosity:**

0.59 cSt at 25°C

**10. STABILITY AND REACTIVITY****A. Chemical stability:**

– This material is stable under recommended storage and handling conditions.

**B. Possibility of hazardous reactivity:**

– Cylinders exposed to fire may vent and release flammable gas.

**C. Conditions to avoid:**

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

**D. Incompatible materials:**

– Not available

**E. Hazardous decomposition products:**

– May emit flammable vapour if involved in fire.

**11. TOXICOLOGICAL INFORMATION****A. Information on the likely routes of exposures:** **Inhalation exposure:**

- May be fatal if swallowed and enters airways
- May cause respiratory irritation.

 **Ingestion exposure:**

– Not available

 **Skin exposure:**

– Causes skin irritation

 **Eye exposure:**

– Cause slight eye irritation.

**B. Delayed and immediate effects and also chronic effects from short and long term exposure:**

**Acute toxicity:**

- \* Oral
  - Not available
- \* Dermal
  - Not available
- \* Inhalation
  - [n-Heptane] : LC50 = 53 mg/l 4 hr Rat (NITE(2006))

 **Skin corrosion/irritation:**

- Causes skin irritation

 **Serious eye damage/irritation:**

- Cause slight eye irritation.

 **Respiratory sensitization:**

- Not available

 **Skin sensitization:**

- Not available

 **Carcinogenicity:**

- \* IARC
  - Not available
- \* OSHA
  - Not available
- \* ACGIH
  - Not available
- \* NTP
  - Not available
- \* EU CLP
  - Not available

 **Germ cell mutagenicity:**

- Not available

 **Reproductive toxicity:**

- Not available

 **Specific target organ systemic toxicity–single exposure:**

- May cause drowsiness and dizziness.
- May cause respiratory irritation.

 **Specific target organ systemic toxicity–repeated exposure:**

- May cause damage to organs through prolonged or repeated exposure

 **Aspiration hazard:**

- May be fatal if swallowed and enters airways



C. Numerical measures of toxicity(such as acute toxicity estimate):

- Not available

12. ECOLOGICAL INFORMATION

A. Aquatic, terrestrial organisms toxicity:

- Fish
  - [n-Heptane] : LC50 = 375 mg/l 96 hr Oreochromis mossambicus (ECOTOX)
- Crustaceans
  - [n-Heptane] : EC50 0.64 mg/L 48hr (ECHA)
- Algae
  - Not available

B. Persistence and degradability:

- Persistence
  - [n-Heptane] : log Kow 4.66 (ICSC)
- Degradability
  - Not available

C. Bioaccumulative potential:

- Bioaccumulative potential
  - Not available
- Biodegradation
  - Not available

D. Mobility in soil:

- Not available

E. Other adverse effects:

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods:

- Since more than two kinds of designaed waste is mixed, it is difficult to treat sepatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Disposal considerations(Specify disposal container and methods):

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN Number:

- 1206

**B. UN Proper Shipping Name:**

- HEPTANES

**C. Transport hazard class(es):**

- 3

**D. Packing group, if applicable:**

- II

**E. Environmental hazards:**

- o IMDG : YES (MARINE POLLUTANT)

**F. Special precautions for user:**

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-D (Flammable liquids)

## 15. REGULATORY INFORMATION

**A. Safety, health and environmental regulations specific for the product in question:**

- POPs Management Law
  - Not applicable
- Information of EU Classification
  - \* Classification
    - [n-Heptane] : H225, H304, H315, H336, H410
- U.S. Federal regulations
  - \* OSHA PROCESS SAFETY (29CFR1910.119)
    - Not applicable
  - \* CERCLA Section 103 (40CFR302.4)
    - Not applicable
  - \* EPCRA Section 302 (40CFR355.30)
    - Not applicable
  - \* EPCRA Section 304 (40CFR355.40)
    - Not applicable
  - \* EPCRA Section 313 (40CFR372.65)
    - Not applicable
- Rotterdam Convention listed ingredients
  - Not applicable
- Stockholm Convention listed ingredients
  - Not applicable
- Montreal Protocol listed ingredients
  - Not applicable

## 16. OTHER INFORMATION

**A. References and sources for data:**

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or

# Material Safety Data Sheet

fitness for a particular purpose is made with respect to the product or the information contained herein.  
– This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

**B. Originated date:**

– 2009-06-25

**C. Revision number and date:**

- Revision number: 8
- Final revision data: 9/13/2021