



Safety Data Sheet

Revision Date: 14-aug-2013

Version No.: 1

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name/designation	Heptane, Universal Chromatography Grade
Product No.	BDH24539 (VWR International)
Substance name	Heptane (mixture of isomers)
CAS No.	142-82-5
INDEX no.	601-008-00-2
other means of identification	

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses for laboratory use and chemical production.

Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

VWR International LLC

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/city	Radnor, PA 19087
country	United States of America
Telephone	+1-800-932-5000 toll-free within US/CA +1-610-386-1700
Telefax	+1-610-728-2103
E-mail	NAMSDS@vwr.com

Emergency telephone

Telephone	+1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA) +1-613-966-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)
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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

hazard classes and hazard categories	Hazard Statements	classification procedure	remark
Flammable liquid, category 2	H225		
Aspiration hazard, category 1	H304		
Skin irritation, category 2	H315		
Specific target organ toxicity (single exposure), category 3, narcotic effect	H336		
Hazardous to the aquatic environment, chronic, category 1	H410		

Target Organs: Central nervous system, Heart, Lungs, Ears

OSHA hazards: Flammable liquid, Irritant

Other hazards :

Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



Signal word

Danger

Hazard Statements

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 statements

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P301+P331	IF SWALLOWED: Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309+P310	IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

Other hazards

WHMIS Classification

B2 - Flammable liquid - Flammable liquid

D2B - Toxic Material Causing Other Toxic Effects - Moderate skin irritant

HMIS Classification

Health hazard: 2
Chronic health hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 3
Reactivity hazard: 0

SVHC

No

3. Composition/ Information on ingredients

Molecular formula	$\text{H}_3\text{C}(\text{CH}_2)_5\text{CH}_3$
Molecular weight (g/mol)	100.2 g/mol
CAS No.	142-82-5
EC No	205-563-8
INDEX no.	601-008-00-2

4. First-aid measures

General information

IF exposed: Immediately call a POISON CENTER or doctor/ physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

After inhalation

Immediately call a POISON CENTER or doctor/ physician. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Immediately call a POISON CENTER or doctor/ physician. Do not induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

Self-protection of the first aider

First aider: Pay attention to self-protection!

Information to physician:

Symptoms	No data available
Hazards	No data available
Treatment	No data available

5. Firefighting measures

Suitable extinguishing media

Water spray, ABC-powder, Carbon dioxide (CO₂), Nitrogen

Extinguishing media which must not be used for safety reasons:

No restriction

Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO₂), Carbon monoxide

Advice for firefighters

DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Environmental precautions

Do not allow to enter into surface water or drains. Danger of explosion.

Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Clean contaminated objects and areas thoroughly observing environmental regulations. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

Additional information

Clear spills immediately.

7. Handling and storage

Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid: Inhalation. Avoid contact with skin and eyes. Provide adequate ventilation as well as local exhaustion at critical locations. Keep away from sources of ignition. - No smoking. Usual measures for fire prevention.

Conditions for safe storage, including any incompatibilities

storage temperature

15-25°C

Keep container tightly closed in a cool, well-ventilated place. Store in a place accessible by authorized persons only. Always close containers tightly after the removal of product.

Specific end use(s)
No data available

8. Exposure controls / Personal protection

Control parameters

TWA 400 ppm, Canada. British Columbia OEL

STEL 500 ppm, Canada. British Columbia OEL

TWAE V 400 ppm, 1,640 mg/m³, Canada. Quebec OELs

STEV 500 ppm, 2,050 mg/m³, Canada. Quebec OELs

TWA 400 ppm, 1,640 mg/m³, Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

STEL 500 ppm, 2,050 mg/m³, Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

TWA 85 ppm, 350 mg/m³, USA. NIOSH Recommended Exposure Limits

C 440 ppm, 1,800 mg/m³, USA. NIOSH Recommended Exposure Limits

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protective equipment

Wear suitable protective clothing. When handling with chemical substances, protective, NIOSH approved clothing must be worn.

Eye / face protection

Wear safety glasses with side protection.

Skin protection

When handling with chemical substances, chemical resistant, impermeable protective gloves should be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Protective clothing

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

9. Physical and chemical properties

Information on basic physical and chemical properties

(a) Appearance

Physical state	liquid
Colour	colourless

(b) Odour

No data available

(c) Odour threshold

No data available

Safety relevant basic data

Information on basic physical and chemical properties

(a) Appearance

Physical state	liquid
Colour	colourless

(b) Odour

No data available

(c) Odour threshold

No data available

Safety relevant basic data

(d) pH

No data available

(e) Melting point/freezing point

-90.5°C

(f) Initial boiling point and boiling range

97 to 98 °C (1013 hPa)

(g) Flash point

-4°C

(h) Evaporation rate

No data available

(i) Flammability (solid, gas)

Highly flammable liquid and vapour.

(j) Upper/lower flammability or explosive limits

Lower explosion limit (Vol-%)

No data available

Upper explosion limit (Vol-%)

No data available

(k) Vapour pressure

No data available

(l) Vapour density

No data available

(m) Relative density

0.68 g/cm³ (20°C)

(n) Solubility(ies)

Water solubility (g/l)

No data available

at °C:

Soluble (g/l) in

No data available

(o) Partition coefficient: n-octanol/water

No data available

(p) Auto-ignition temperature

No data available

(q) Decomposition temperature

No data available

(r) Viscosity

Kinematic viscosity	No data available
Dynamic viscosity	No data available
(s) Explosive properties	not applicable
(t) Oxidising properties	not applicable

Other information

Bulk density	No data available
refraction index	No data available
dissociation constant	No data available
Surface tension	No data available
Henry constant	No data available

10. Stability and reactivity

10.1 Reactivity

Vapours can form explosive mixtures with air.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Formation of potentially explosive mixtures with: Oxidising agent, strong

Conditions to avoid

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

Incompatible materials

Rubber articles, Plastic articles

Hazardous decomposition products

No data available

Additional information

No data available

11. Toxicological information

Information on toxicological effects

Acute effects

Acute oral toxicity

Effective dose No data available

species: No data available

Exposure time

remark

source

Acute dermal toxicity

Effective dose No data available

species: No data available

Exposure time

remark

source

Acute inhalation toxicity

Effective dose No data available

species: No data available

Exposure time

remark

source

Irritant and corrosive effects

Primary irritation to the skin

Exposure time

species:

Result

Irritation to eyes

Exposure time

species:

Result

Irritation to respiratory tract

Exposure time

species:

Result

Sensitization

In case of skin contact not sensitizing.

After inhalation not sensitizing.

Specific target organ toxicity (single exposure)

not relevant

Specific target organ toxicity (repeated exposure)

not relevant

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No indication of human carcinogenicity.

Germ cell mutagenicity/Genotoxicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

May be fatal if swallowed and enters airways.

Other adverse effects

No data available

Additional information

No data available

12. Ecological information

Ecotoxicity

Acute (short-term) fish toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) fish toxicity

LC50: No data available

EC50

species:

Exposure time

Acute (short-term) daphnia toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) daphnia toxicity

LC50: No data available

EC50

species:

Exposure time

Acute (short-term) algae toxicity

LC50: No data available

EC50

species:

Exposure time

Chronic (long-term) algae toxicity

LC50: No data available
EC50
species:
Exposure time

Persistence and degradability

No data available

Bioaccumulative potential

Partition coefficient: n-octanol/water No data available

Mobility in soil No data available

Results of PBT assessment No data available

Other adverse effects No data available

13. Disposal considerations

Waste treatment methods

Appropriate disposal / Product

Dispose in accordance with applicable federal, state and local regulations.

Waste code product 07 01 04 (other organic solvents, washing liquids and mother liquors)

Appropriate disposal / Package

Additional information
No data available

14. Transport information

Land transport (ADR/RID)

UN-No.	1206
Proper Shipping Name	HEPTANES
Class(es)	3
Classification code:	FT1
Packing group	III
Hazard label(s)	3

Sea transport (IMDG)

UN-No.	1206
Proper Shipping Name	HEPTANES
Class(es)	3
Classification code:	FT1
Packing group	III
Marine pollutant	
Segregation group	

Air transport (ICAO-TI / IATA-DGR)

UN-No.	1206
Proper Shipping Name	HEPTANES
Class(es)	3
Classification code:	FT1
Packing group	III

Additional information

No data available

15. Regulatory information

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

OSHA Hazards
Flammable liquid, Irritant

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components

Heptane - CAS-No. 142-82-5 - Revision Date 1993-04-24

Pennsylvania Right To Know Components

Heptane - CAS-No. 142-82-5 - Revision Date 1993-04-24

New Jersey Right To Know Components

Heptane - CAS-No. 142-82-5 - Revision Date 1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Chemical Safety Assessment

No data available

16. Other information

Relevant H-phrases (Number and full text)

Hazard Statements

H225	Highly flammable liquid and vapour.
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H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Canada WHMIS Hazard Class:

No data available

WHMIS Classification

B2 - Flammable liquid - Flammable liquid

D2B - Toxic Material Causing Other Toxic Effects - Moderate skin irritant

HMIS Classification

Health hazard: 2
Chronic health hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 3
Reactivity hazard: 0

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.