Heptane

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form	:	Complex Substance
Substance name	:	Heptane
Chemical name	:	Naphtha (petroleum), hydrotreated light
CAS-No.	:	64742-49-0
Product code	:	Hydrocarbon Solvent
Synonyms	:	naphtha (petroleum), hydrotreated light, commercial heptane, aliphatic hydrocarbon, heptane (B) comm grade, n-Heptane, Brake Cleaner

1.2. Recommended use and restrictions on use

Recommended use	:	Industrial use
Restrictions on use	:	None known

1.3. Supplier

ECOLINK

2177 Flintstone Drive

Suite A

Tucker, GA 30084

770-621-8240 (t)

www.ecolink.com

1.4. Emergency telephone number

Emergency number : **INFOTRAC** 800-535-5053

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Specific target organ toxicity (single exposure) Category 3	H336	May cause drowsiness or dizziness
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways
Hazardous to the aquatic environment - Chronic Hazard Category 1	H410	Very toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :
H225 - Highly flammable liquid and vapor
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 (GHS-US) :
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment

P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors
P264 - Wash Skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear eye protection, face protection, protective clothing, protective gloves
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): 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
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P331 - Do NOT induce vomiting
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish
P391 - Collect spillage
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
P501 - Dispose of contents/container in accordance with local, regional, national, and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

This material is defined as a complex substance

Name	Product identifier	%	GHS-US classification
Naphtha (Petroleum), hydrotreated light (Main constituent)	(CAS-No.) 64742-49-0	100	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 1, H410

Hazardous constituents(s) contained in complex substance(s) required for disclosure

Name	Product identifier	%	GHS-US classification
2,3-Dimethylpentane	(CAS-No.) 565-59-3	0 -5	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
3,3-Dimethylpentane	(CAS-No.) 562-49-2	0- 1	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
3-Ethylpentane	(CAS-No.) 617-78-7	0 -5	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
3-Methylhexane	(CAS-No.) 589-34-4	0- 30	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
Hexane, 2-Methyl-	(CAS-No.) 591-76-4	0- 15	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
Methylcyclohexane	(CAS-No.) 108-87-2	0- 20	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
N-Heptane	(CAS-No.) 142-82-5	30- 45	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air.
First-aid measures after skin contact	:	Wash immediately with lots of water (15 minutes)/shower. Soap may be used. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	:	Rinse immediately with plenty of water for 15 minutes. Take victim to an ophthalmologist if irritation persists. Do not apply neutralizing agents. Rinse eyes with water as a precaution.
First-aid measures after ingestion	:	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconcious person. Ingestion of large quantities: immediately to hospital. Call Poison Control Center. Do not induce vomiting. Call a physician immediately.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Use foam, dry chemical, or carbon dioxide (CO2) to extinguish flames.
Unsuitable extinguishing media	:	Straight streams of water

5.2. Specific hazards arising from the chemical

Fire hazard	:	Highly flammable. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.
Reactivity	:	Highly flammable liquid and vapor.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	:	Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.
Emergency procedures	:	Ventilate spillage area. Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapor with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.
Methods for cleaning up	:	Take up liquid spill into absorbent material. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Take up liquid spill into a non combustible material e.g.: sand/earth. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with a soap solution. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Take precautions against electrostatic charges. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Ample fire water supply should be available. A fixed sprinkler/ deluge system is recommended. The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Handle containers with care. Open slowly in order to control possible pressure release.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits: Heptane 400 ppm ACGIH; 500 ppm OSHA

8.2. Appropriate engineering controls

Appropriate engineering controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

GIVE GOOD RESISTANCE: neoprene. nitrile rubber. PVC.

GIVE POOR RESISTANCE: butyl rubber. natural rubber

Hand protection:

Gloves

Eye protection:

Safety glasses

Skin and body protection:

Head/neck protection. Protective clothing

Respiratory protection:

Gas mask. High vapour/gas concentration: self-contained respirator

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the supplier for additional information.

Physical state : Liquid

Appearance : Liquid.

Color	:	Colorless
Odor	:	Mild petroleum / Solvent
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	201 - 208 °F
Flash point	:	> 25 °F
Relative evaporation rate (butyl acetate=1)	:	8.4
Relative evaporation rate (ether=1)	:	1.4
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	5.398 kPa (20 °C)
Vapor density	:	3.5 at 101 kPa
Relative vapor density at 20 °C	:	No data available
Relative density	:	0.7
Specific gravity / density	:	0.684 kg/l
Solubility	:	Insoluble in water
Log Pow	:	4 (Calculated)
Auto-ignition temperature	:	> 433.4 °F
Decomposition temperature	:	No data available
Viscosity, kinematic	:	0.49 cSt
Viscosity, dynamic	:	0.00032 Pa.s (25 °C)
Explosion limits	:	0.8 - 8 vol % LEL: 0.8 vol % UEL: 8 vol %
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

Specific conductivity	:	0.04 pS/m
VOC content	:	100 %
Other properties	:	Gas/vapour heavier than air at 20°C. Volatile. May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Heptane (64742-49-0)	
LD50 oral rat	> 2000 mg/kg (Rat)

Heptane (64742-49-0)	
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l (4 h, Rat)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : May cause drowsiness or dizziness.
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : May be fatal if swallowed and enters airways.
Symptoms/effects : May cause drowsiness or dizziness.
Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Dizziness. Nausea. Narcosis. Disturbances of consciousness.
Symptoms/effects after skin contact : ON CONTINUOUS EXPOSURE/CONTACT: Not irritating. Cracking of the skin.
Symptoms/effects after eye contact : Slight irritation.
Symptoms/effects after ingestion : Nausea. Risk of aspiration pneumonia. Symptoms similar to those listed under inhalation.
Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Feeling of weakness. Impairment of the nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment. Very toxic to aquatic life with long lasting effects.
Ecology - water : Severe water pollutant (surface water).

12.2. Persistence and degradability

Heptane (64742-49-0)	
Persistence and degradability	Contains readily biodegradable component(s).

12.3. Bioaccumulative potential

Heptane (64742-49-0)	
Log Pow	4 (Calculated)
Bioaccumulative potential	Contains bioaccumulative component(s).

12.4. Mobility in soil

Heptane (64742-49-0)	
Ecology - soil	No (test)data on mobility of the components available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	:	UN1206 Heptanes, 3, II
UN-No.(DOT)	:	UN1206
Proper Shipping Name (DOT)	:	Heptanes
Class (DOT)	:	3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	:	II - Medium Danger
Hazard labels (DOT)	:	3 - Flammable liquid

Dangerous for the environment	:	Yes
Marine pollutant	:	Yes

DOT Packaging Non Bulk (49 CFR 173.xxx)	:	202
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Special Provisions (49 CFR 172.102)	:	IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Emergency Response Guide (ERG) Number	:	128
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG)	:	UN 1206 HEPTANES, 3, II
UN-No. (IMDG)	:	1206
Proper Shipping Name (IMDG)	:	HEPTANES
Class (IMDG)	:	3 - Flammable liquids
Packing group (IMDG)	:	II - substances presenting medium danger
Limited quantities (IMDG)	:	1 L
EmS-No. (1)	:	F-E
EmS-No. (2)	:	S-D

Marine pollutant : Yes

Air transport

Transport document description (IATA)	: UN 1206 Heptanes, 3, II
UN-No. (IATA)	: 1206
Proper Shipping Name (IATA)	: Heptanes
Class (IATA)	: 3 - Flammable Liquids
Packing group (IATA)	: II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Heptane (64742-49-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable Health hazard - Immediate hazard.

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Revision date : 05/01/2018

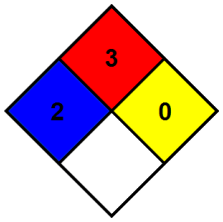
Full text of H-phrases:

H225	Highly flammable liquid and vapor
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

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)