

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance (UVCB)
Trade name	: Heptane
IUPAC name	: HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS
EC-No.	: 927-510-4
CAS-No.	: 64742-49-0
REACH registration No.	: 01-2119475515-33-0008
Formula	: Combination of mainly C_nH_{2n+2} and C_nH_{2n} structures, comprised mainly within a C7 carbon number.

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

Relevant identified uses

Intended for general public	
Main use category	: Consumer use, Industrial use, Professional use
Use of the substance/mixture	: Manufacture of Substance. Distribution of Substance. Formulation and (Re)packing of Substances and Mixtures. Use in Coatings. Use in Cleaning Agents. Use in Lubricants. Use in Metal Working Fluids and Rolling Oils. Use as a Blowing Agent. Use in Mining Operations. Use as Release Agents or Binders. Use as a Fuel. Use in Laboratories. Use in Rubber Manufacture and Processing. Use in Polymer Processing. Use in Agrochemicals. Other Consumer Uses.

Uses advised against

Restrictions on use	: Anything other than the above
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1.3. Details of the supplier of the safety data sheet

Manufacturer

GADIV PETROCHEMICAL INDUSTRIES LTD
P.O. Box 4
3100001 Haifa
Israel
T +972-4-8788020, F +972-4-8788018
Gadiv@bazan.co.il, www.bazan.co.il

1.4. Emergency telephone number

Emergency number	: +972-4-8788512; Environment Incident Notification center 24-HOUR: *5799
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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according to UK REACH/ according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 2015/830

2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

GHS08

GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: 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.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read carefully and follow all instructions.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P241 - Use explosion-proof ventilating, lighting, electrical equipment.
P261 - Avoid breathing fume, gas, mist, spray, vapours.
P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352 - If on skin: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call doctor, a POISON CENTER if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash before reuse.
P370+P378 - In case of fire: Use ABC-powder, BC-powder, alcohol resistant foam, carbon dioxide (CO₂), dry extinguishing powder to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents and container to a hazardous or special waste collection point, comply with applicable local, national and international regulation..

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : UVCB
Name : Heptane
CAS-No. : 64742-49-0
EC-No. : 927-510-4

Name	Product identifier	%
Heptane	CAS-No.: 64742-49-0 EC-No.: 927-510-4 REACH-no: 01-2119475515-33-0008	100
n-Hexane	CAS-No.: 110-54-3 EC-No.: 203-777-6	≤ 2

Full text of H- and EUH-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label).
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	: Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. Avoid breathing mist, spray, vapours.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Recover small spills with a suitable absorbent, like diatomaceous earth. Recover large spills by pumping (use an explosion proof or hand pump). Contain large spills to maximize product recovery or disposal. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Use only non-sparking tools. Avoid breathing fume, gas, mist, spray, vapours. Use only outdoors or in a well-ventilated area.
Hygiene measures : Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating, Equipment equipment.
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, sparks, Sources of ignition. Keep in fireproof place. Keep container tightly closed.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. Natural rubber. Certain plastics, rubbers and coatings. Synthetic rubber.
Storage temperature : Ambient
Packages and containers: : Stainless steel. Storage in steel recommended. Polyethylene.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL and PNEC

Heptane (64742-49-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	300 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2085 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	149 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	447 mg/m ³
Long-term - systemic effects, dermal	149 mg/kg bodyweight/day

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8.2. Exposure controls

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Use eye protection according to EN 166, designed to protect against liquid splashes. Chemical goggles or safety glasses

Skin protection

Skin and body protection:

In case of repeated or prolonged exposure use Chemical resistant protective apron/clothing (tested to EN 14605 or equivalent); Chemical resistant gloves (according to European standard EN 374 or equivalent). When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection must be worn. Protective clothing (EN 14605 or EN 13034)

Hand protection:

In case of repeated or prolonged contact wear gloves. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. For prolonged contact, use nitrile or neoprene gloves or other material resistant to petroleum oils. Neoprene gloves are recommended with breakthrough time of approx. 25 minutes according to ISO 374-1 (0.1 mm thickness); changing gloves after 20 minutes is recommended.

Respiratory protection

Respiratory protection:

Wear a mask. If this material is handled at elevated temperature or under mist forming conditions, approved respiratory protection equipment should be used. In case of insufficient ventilation, wear suitable respiratory equipment (EN 136/140/145). Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. [In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls

Environmental exposure controls:

Avoid direct discharge into drains. Collect all waste in suitable and labelled containers and dispose according to local legislation. Relevant water authorities should be notified of any large spillage to water course or drain.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Clear.
Odour	: Benzene-like.
Odour threshold	: Not available
Melting point	: -20 °C
Freezing point	: Not available
Boiling point	: 83 – 105 °C
Flammability	: Highly flammable liquid and vapour.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: < 0 °C Atm. press.: 1 atm
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 0,5 – 1,2 mm ² /s (at 20 deg C)
Solubility	: Water: 1,88 g/l at 23.5°C
Partition coefficient n-octanol/water (Log Kow)	: Not available

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Partition coefficient n-octanol/water (Log Pow)	: 2,13
Vapour pressure	: 6 kPa Temp.: 20 °C
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0,68 – 0,78 g/cm ³ Typical value: 0.693 (15 Deg C).
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agents.

10.6. Hazardous decomposition products

None under normal conditions. Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Additional information	: Based on available data, the classification criteria are not met

Heptane (64742-49-0)	
LD50 dermal rat	2800 – 3100 mg/kg bodyweight Animal: rat
LC50 Inhalation - Rat	> 23,3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: May cause drowsiness or dizziness.

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STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

Heptane (64742-49-0)

LOAEC (inhalation, rat, vapour, 90 days) 16,6 mg/l air Animal: rat, Animal sex: male

NOAEC (inhalation, rat, vapour, 90 days) 3,3 mg/l air Animal: rat, Animal sex: male

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

Heptane (64742-49-0)

Viscosity, kinematic 0,5 – 1,2 mm²/s (at 20 deg C)

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : No additional information available

Other information

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Heptane (64742-49-0)

LOEC (chronic) 0,32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

NOEC (chronic) 0,17 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Heptane (64742-49-0)

Persistence and degradability May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Heptane (64742-49-0)

Partition coefficient n-octanol/water (Log Pow) 2,13

Bioaccumulative potential Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : No data available.

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according to UK REACH/ according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 2015/830

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, national regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecological waste information : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1206	UN 1206	UN 1206	UN 1206	UN 1206
14.2. UN proper shipping name				
HEPTANES	HEPTANES	Heptanes	HEPTANES	HEPTANES
14.3. Transport hazard class(es)				
3	3	3	3	3
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-E EmS-No. (Spillage): S-D	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

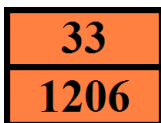
Classification code (ADR) : F1
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20

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Hazard identification number (Kemler No.) : 33
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : 3YE

Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2
Stowage category (IMDG) : B
Properties and observations (IMDG) : Colourless, volatile liquids. Explosive limits: 1.1% to 6.7%. n-HEPTANE: flashpoint -4°C c.c.
Immiscible with water. Irritating to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3H

Inland waterway transport

Classification code (ADN) : F1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	Heptane
3(b)	Heptane
3(c)	Heptane
40.	Heptane

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Listed on the REACH Candidate List: n-Hexane

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

VOC Directive (2004/42)

Organic solvent : Yes

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Sources of Key data : ECHA (European Chemicals Agency). CLP Inventory. Supplier information. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (et sequens).

Other information : None.

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1

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Full text of H- and EUH-statements:

Flam. Liq. 2	Flammable liquids, Category 2
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.
H411	Toxic to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.