SAFETY DATA SHEET

N-Heptane

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

1.1. Product identifier

Trade name

N-Heptane

Product no.

1640

REACH registration number

01-2119457603-38-XXXX

Other means of identification

Index no.: 601-008-00-2
EC No.: 205-563-8
CAS No.: 142-82-5

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

Relevant identified uses of the substance or mixture

Laboratory use

Relevant identified uses of the substance or mixture (REACH)

No special

Uses advised against

No special

1.3. Details of the supplier of the safety data sheet

Company and address

Solveco AB
Tallbacksgatan 10
S-195 72 Rosersberg
Sverige
T: +46 (0)8 732 72 75
F: +46 (0)8 732 72 76
http://www.solveco.se

Contact person

Habib Hourani

E-mail

info@solveco.se

SDS date

2020-08-19

SDS Version

2.0

Date of previous version

2020-08-11 (1.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Liq. 2; H225, Highly flammable liquid and vapour.

Asp. Tox. 1; H304, May be fatal if swallowed and enters airways.

Skin Irrit. 2; H315, Causes skin irritation.

STOT SE 3; H336, May cause drowsiness or dizziness.

Aquatic Acute 1; H400, Very toxic to aquatic life.

Aquatic Chronic 1; H410, Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram(s)

Signal word

Danger

Hazard statement(s)

Highly flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Safety statement(s)

General

-

Prevention

P264, Wash hands/exposed areas thoroughly after handling.
P280, Wear protective gloves/eye protection.

Response

P331, Do NOT induce vomiting.
P301+P310, IF SWALLOWED: Immediately call a POISON CENTER/doctor.

Storage

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

Disposal

P501, Dispose of contents/container to an approved waste disposal plant.

Hazardous substances

3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane

2.3. Other hazards

Additional labelling

Not applicable

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Product/Ingredient name	Identifiers	% w/w	Classification	Note
3,3-dimethylpentane;heptane;3-methylhexane;2,3-	CAS No.: 142-82-5 EC No.: 205-563-8	95-100%	STOT SE 3, H336 Skin Irrit. 2, H315 Asp. Tox. 1, H304	EU

dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	REACH No.: 01-2119457603-38-XXXX Index No.: 601-008-00-2	Flam. Liq. 2, H225 Aquatic Chronic 1, H410 (M=1) Aquatic Acute 1, H400 (M=1)

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

EU: European occupational exposure limit

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

Eye contact

Upon irritation of the eye: Remove contact lenses and open eyes widely. Flush eyes with water or saline water(20-30°C) for at least 5 minutes. Seek medical assistance and continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

This product contains substances that can cause chemical pneumonia if inhaled. The symptoms of chemical pneumonia may appear after several hours.
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

IF exposed or concerned:
Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbon dioxide, powder, water mist. Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO□).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Avoid direct contact with spilled substances.

Avoid inhalation of vapours from spilled material.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.

To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on “Disposal considerations” in regard of handling of waste.

See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protect electrical equipment in accordance with current standards. To divert static electricity during transmission, containers must be grounded and connected by wire with the receiving containers. Do not use spark-forming tools.

Avoid static electricity.

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/lighting/ventilating]equipment.

Use non-sparking tools.

Smoking, drinking and consumption of food is not allowed in the work area.

See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Take action to prevent static discharges.

Storage temperature

Dry, cool and well ventilated

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

—
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane
Long term exposure limit (8 hours): 500 ppm
Long term exposure limit (8 hours): 2085 mg/m³

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020)

DNEL

No data available

PNEC

No data available

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, eating and drinking are not allowed in the work premises

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally

Use only CE marked protective equipment.

Respiratory Equipment

Work situation	Recommended Filter type	Class	Colour	Standards	
If ventilation at the work place is insufficient, use a half- or full mask with an appropriate filter or an air-supplied breathing apparatus.	A	-	Brown	EN14387	

Skin protection

Work situation	Recommended	Type/Category	Standards	
	Dedicated work clothing should be worn.	-	-	

Hand protection

Work situation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
	Nitrile	-	-	EN374-2	

Eye protection

Work situation	Recommended	Standards	
	Wear safety glasses with side shields.	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form
Liquid

Colour
Colourless

Odour
Testing not relevant or not possible due to nature of the product.

Odour threshold (ppm)
100-1600 mg/m3

pH
Testing not relevant or not possible due to nature of the product.

Density (g/cm³)
0.684

Viscosity
Testing not relevant or not possible due to nature of the product.

Phase changes

Melting point (°C)
-91

Boiling point (°C)
98.40 °C

Vapour pressure
6.30 kPa

Vapour density
3,5

Decomposition temperature (°C)
Testing not relevant or not possible due to nature of the product.

Evaporation rate (n-butylacetate = 100)
Testing not relevant or not possible due to nature of the product.

Data on fire and explosion hazards

Flash point (°C)
-4.00 °C

Ignition (°C)
215 °C

Auto flammability (°C)

Testing not relevant or not possible due to nature of the product.

Explosion limits (% v/v)

1.05 - 6.70 v/v%

Explosive properties

Testing not relevant or not possible due to nature of the product.

Oxidizing properties

Testing not relevant or not possible due to nature of the product.

Solubility

Solubility in water

Insoluble

n-octanol/water coefficient

Testing not relevant or not possible due to nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section “Handling and storage”.

10.3. Possibility of hazardous reactions

No special

10.4. Conditions to avoid

Avoid static electricity.

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product/Ingredient name	Species	Test	Route of exposure	Result
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	Rat	LD50	Oral	>17000 mg/kgbw
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	Rat	LC50 (4 hours)	Inhalation	60 mg/l
3,3-dimethylpentane;heptane;3-	Rabbit	LD50	Dermal	3000 mg/kgbw

methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane				
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	Mouse	LC Low	Inhalation	59000 /41min mg/m³

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

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.

Long term effects
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Other information
No special

SECTION 12: Ecological information

12.1. Toxicity

Product/Ingredient name	Species	Test	Duration	Result
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-	Algae	IC50	72 hours	>200 mg/l

methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane				
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	Fish (Oncorhynchus kisutch)	LC50	96 hours	>100 mg/l
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	Daphnia (Daphnia magna)	EC50	48 hours	>50 mg/l

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

Product/Ingredient name	Potential bioaccumulation	LogPow	BCF
3,3-dimethylpentane;heptane;3-methylhexane;2,3-dimethylpentane;2,2-dimethylpentane;2,4-dimethylpentane;isoheptane;2-methylhexane;2,2,3-trimethylbutane;3-ethylpentane;n-heptane	No data available	4,66	776.2500000

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

EWC code

20 01 13* Solvents

Specific labelling

Not applicable

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 - 14.4

This product is within scope of the regulations of transport of dangerous goods.

▼ADR/RID

UN no.	Proper Shipping Name	Class	PG	Tunnel restriction code
1206	HEPTANES	3	II	2 (D/E)

▼IMDG

UN no.	Proper Shipping Name	Class	PG	EmS
1206	HEPTANES	3	II	F-E, S-D

▼IATA

UN no.	Proper Shipping Name	Class	PG
1206	HEPTANES	3	II

"MARINE POLLUTANT"

Yes

14.5. Environmental hazards

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements

SEVESO - Categories / dangerous substances

P5c

E1

Additional information

Not applicable

Sources

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

The Control of Major Accident Hazards (COMAH) Regulations 2015.

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 (CLP).

Regulation (EC) 1907/2006 (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H336, May cause drowsiness or dizziness.
H315, Causes skin irritation.
H304, May be fatal if swallowed and enters airways.
H225, Highly flammable liquid and vapour.
H410, Very toxic to aquatic life with long lasting effects.
H400, Very toxic to aquatic life.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:
The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)
The classification of the mixture in regard of physical hazards has been based on experimental data.
The classification of the mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

The safety data sheet is validated by

Habib Hourani

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.