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

· 1.1 Product identifier

· Trade name: <u>Heptane</u>

· Article number: 1182

· CAS Number: 64742-49-0

· Registration number 01-2119475515-33

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

No further relevant information available.

· Application of the substance / the mixture Solvent for various applications

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Möller Chemie GmbH & Co. KG

Bürgerkamp 1 D-48565 Steinfurt Tel.: 02551/9340-0 Fax: 02551/9340-60

· Further information obtainable from: Product safety department

· 1.4 Emergency telephone number:

Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS02 flame

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



GHS08 health hazard

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



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms









GHS02 G

GHS07

GHS08

GHS09

· Signal word Danger

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· Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways. H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P331 Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water [or shower].

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· 2.3 Other hazards

endocrine harmful characteristics:

No data available.

· Results of PBT and vPvB assessment

· PRT·

The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).

· vPvB:

The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

SECTION 3: Composition/information on ingredients

- · 3.1 Substances
- · CAS No. Description

64742-49-0 Heptane

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · After inhalation: Supply fresh air, consult doctor in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Do not induce vomiting; call for medical help immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide, carbon dioxide

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· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling Ensure good ventilation / exhaustion at the workplace.
- · Information about fire and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in well closed containers, cool and dry.
- · Information about storage in one common storage facility: Not mandatory.
- · Further information about storage conditions: Keep container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

RCP-TWA: 1600 mg/m³ (total hydrocarbons)

· DNELs

worker:

long-term systemic effects, dermal: 300 mg/kg/d Long-term systemic effects, inhalative: 2085 mg/m³

Consumer:

long-term systemic effects, dermal: 149 mg/kg/d Long-term systemic effects, inhalative: 447 mg/m³ long-term systemic effects, oral: 149 mg/kg/d

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Appropriate engineering controls No further data; see item 7.
- · Individual protection measures, such as personal protective equipment
- · Respiratory protection: Not required.
- · Hand protection

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye/face protection



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

Colour:
 Odour:
 Odour threshold:
 Melting point/freezing point:

Colourless

 Characteristic
 Not determined
 Undetermined

· Boiling point or initial boiling point and boiling

range 94-100 °C
• Flammability Not applicable.

· Lower and upper explosion limit

· Lower: Not determined.
· Upper: Not determined.

· Flash point: -5 °C

Decomposition temperature: Not determined.pH Not determined.

· Viscosity:

Kinematic viscosityDynamic:Not determined.Not determined.

·Solubility

water: Not or hardly miscible.

• Partition coefficient n-octanol/water (log value) Not determined. • Vapour pressure at 20 °C: 100 hPa

· Density and/or relative density

Density at 15 °C: 705-725 g/cm³
Relative density Not determined.
Vapour density Not determined.

· 9.2 Other information

· Appearance:

Form: Fluid

· Important information on protection of health and environment, and on safety.

· Auto-ignition temperature: Not determined.

Explosive properties: Product is not explosive. However, formation of

explosive air/vapour mixtures are possible.

· Change in condition

· Evaporation rate Not determined.

· Information with regard to physical hazard classes

Explosives Void
Flammable gases Void
Aerosols Void
Oxidising gases Void
Gases under pressure Void

· Flammable liquids

Highly flammable liquid and vapour.

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· Flammable solids	Void	
· Self-reactive substances and mixtures	Void	
· Pyrophoric liquids	Void	
· Pyrophoric solids	Void	
Self-heating substances and mixtures	Void	
· Substances and mixtures, which emit flamm	able	
gases in contact with water	Void	
· Oxidising liquids	Void	
· Oxidising solids	Void	
· Organic peroxides	Void	
· Corrosive to metals	Void	
· Desensitised explosives	Void	

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions Reacts with strong oxidising agents.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: Strong oxidizing agents
- · 10.6 Hazardous decomposition products:

Thermal decomposition is highly dependent on the external conditions. It forms a complex mixture of liquid and gases in the air, including carbon monoxide and carbon dioxide and other organic compounds, when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Based on available data, the classification criteria are not met.
- · LD/LC50 values relevant for classification:

LD50/oral/rat > 5840 mg/kg

LD50/dermal/rat > 2920 mg/kg

LC50/4h/inhalative/rat > 23.3 mg/l

· 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.

· Additional toxicological information:

endocrine harmful characteristics:

No data available.

- · 11.2 Information on other hazards
- · Endocrine disrupting properties Substance is not listed.

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SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

Fishes:

LC/EC/IC50: 1 - 10 mg/l

Algae:

LC/EC/IC50: 1 - 10 mg/l

invertebrates:

LC/EC/IC50: 1 - 10 mg/l

- · 12.2 Persistence and degradability Easily biodegradable
- · 12.3 Bioaccumulative potential Bioaccumulation possible.
- · 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · PBT: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
- · vPvB: This substance is not considered to be very persistent nor very bioaccumulative (vPvB).
- 12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects
- · Remark: Toxic for fish
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Toxic for aquatic organisms

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation Disposal according to local regulations.
- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1	UN	number	or ID	number
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· ADR, IMDG, IATA UN1206

· 14.2 UN proper shipping name

ADR 1206 HEPTANES, ENVIRONMENTALLY HAZARDOUS

· **IMDG** HEPTANES, MARINE POLLUTANT

· IATA HEPTANES

· 14.3 Transport hazard class(es)

 \cdot ADR



Class 3 (F1) Flammable liquids.

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· Label	3	
·IMDG		
· Class · Label	3 Flammable liquids. 3	
· IATA		
· Class · Label	3 Flammable liquids. 3	
· 14.4 Packing group · ADR, IMDG, IATA	II	
14.5 Environmental hazards:	Environmentally hazardous substance, liquid; Marine Pollutant	
· Marine pollutant: · Special marking (ADR):	Yes Symbol (fish and tree) Symbol (fish and tree)	
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-D B	
· 14.7 Maritime transport in bulk according to IM instruments	10 Not applicable.	
Transport/Additional information:		
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
· Transport category · Tunnel restriction code	2 D/E	
· UN "Model Regulation":	UN 1206 HEPTANES, 3, II, ENVIRONMENTALLE HAZARDOUS	

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I Substance is not listed.
- · Seveso category

E2 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40

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· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

- · REGULATION (EU) 2019/1148
- · Annex I RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

- · Annex II REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Product safety department
- · Contact: Mrs. Steyer
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2

- EU