

according to Regulation (EC) No. 1907/2006

Creation Date 26-Oct-2009 Revision Date 03-May-2024 Revision Number 5

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Product Description: n-Hexane
Cat No.: C32692
Synonyms Hex

 Index No
 601-037-00-0

 CAS No
 110-54-3

 EC No
 203-777-6

 Molecular Formula
 C6 H14

 REACH registration number

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

Recommended Use Laboratory chemicals.

Sector of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

**Product category** PC21 - Laboratory chemicals

**Process categories** PROC15 - Use as a laboratory reagent

**Environmental release category** ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Uses advised against No Information available

#### 1.3. Details of the supplier of the safety data sheet

Company

Thermo Fisher (Kandel) GmbH

Erlenbachweg 2, 76870 Kandel, Germany

Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300

**Swiss distributor -** Fisher Scientific AG Neuhofstrasse 11, CH 4153 Reinach

Tel: +41 (0) 56 618 41 11

https://www.fishersci.ch/ch/en/customer-help-

support/forms/email-us.html

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:

Tox Info Suisse Emergency Number: 145 (24hr)

Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)

Chemtrec (24h) Toll-Free: 0800 564 402 Chemtrec Local: +41-43 508 20 11 (Zurich)

# **SECTION 2: HAZARDS IDENTIFICATION**

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# 2.1. Classification of the substance or mixture

#### CLP Classification - Regulation (EC) No 1272/2008

# **Physical hazards**

Flammable liquids Category 2 (H225)

#### **Health hazards**

Aspiration Toxicity	Category 1 (H304)
Skin Corrosion/Irritation	Category 2 (H315)
Reproductive Toxicity	Category 2 (H361f)
Specific target organ toxicity - (single exposure)	Category 3 (H336)
Specific target organ toxicity - (repeated exposure)	Category 2 (H373)

#### **Environmental hazards**

Chronic aquatic toxicity Category 2 (H411)

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



Signal Word

**Danger** 

#### **Hazard Statements**

- 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
- H361f Suspected of damaging fertility
- H373 May cause damage to organs through prolonged or repeated exposure
- H411 Toxic to aquatic life with long lasting effects

## **Precautionary Statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- 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
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

#### 2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

This product does not contain any known or suspected endocrine disruptors Toxic to terrestrial vertebrates

# **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

# 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No
				1272/2008
Hexane	110-54-3	EEC No. 203-777-6	<=100	Flam. Liq. 2 (H225)
				Asp. Tox. 1 (H304)
				Skin Irrit. 2 (H315)
				STOT SE 3 (H336)
				Repr. 2 (H361f)
				STOT RE 2 (H373)
				Aquatic Chronic 2 (H411)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Hexane	STOT RE 2 (H373) :: C>=5%	-	-

REACH registration number	
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Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

**General Advice** If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

**Skin Contact**Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call

a physician or poison control center immediately. If vomiting occurs naturally, have victim

lean forward.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur. Risk of serious damage to the lungs (by aspiration).

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

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

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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

Notes to Physician Treat symptomatically. Symptoms may be delayed.

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# **SECTION 5: FIREFIGHTING MEASURES**

# 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

### Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

## 5.2. Special hazards arising from the substance or mixture

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO2).

# 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

## 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

# 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

# **SECTION 7: HANDLING AND STORAGE**

# 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

# **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before

n-Hexane

values. Wash hands before breaks and afterwards

re-use. Wash hands before breaks and after work.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510

Storage Class (LGK) (Germany)

Class 3

Switzerland - Storage of hazardous substances

Storage class - SC 3

https://www.kvu.ch/de/themen/stoffe-und-produkte https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

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#### 7.3. Specific end use(s)

Use in laboratories

# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

# 8.1. Control parameters

#### **Exposure limits**

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Hexane	TWA: 20 ppm (8hr)	TWA: 72 mg/m <sup>3</sup>	TWA / VME: 20 ppm (8	TWA: 20 ppm 8 uren	TWA / VLA-ED: 20 ppm
	TWA: 72 mg/m³ (8hr)	TWA: 20 ppm	heures). restrictive limit	TWA: 72 mg/m <sup>3</sup> 8 uren	(8 horas)
		STEL: 60 ppm	TWA / VME: 72 mg/m <sup>3</sup>		TWA / VLA-ED: 72
		STEL: 216 mg/m <sup>3</sup>	(8 heures). restrictive		mg/m³ (8 horas)
			limit TWA / VME: 1000		
			mg/m³ (8 heures).		
			STEL / VLCT: 1500		
			mg/m³.		

L	Component	Italy	Germany	Portugal	The Netherlands	Finland
Г	Hexane	TWA: 20 ppm 8 ore.	TWA: 180 mg/m <sup>3</sup>	TWA: 20 ppm 8 horas	STEL: 144 mg/m <sup>3</sup> 15	TWA: 20 ppm 8 tunteina
		Time Weighted Average	TWA: 50 ppm	TWA: 72 mg/m <sup>3</sup> 8 horas	minuten	TWA: 72 mg/m <sup>3</sup> 8
		TWA: 72 mg/m <sup>3</sup> 8 ore.		Pele	TWA: 72 mg/m <sup>3</sup> 8 uren	tunteina
		Time Weighted Average			· ·	lho

Component	Austria	Denmark	Switzerland	Poland	Norway
Hexane	MAK-KZGW: 80 ppm 15	TWA: 20 ppm 8 timer	Haut/Peau	TWA: 72 mg/m <sup>3</sup> 8	TWA: 20 ppm 8 timer
	Minuten	TWA: 72 mg/m <sup>3</sup> 8 timer	STEL: 400 ppm 15	godzinach	TWA: 72 mg/m <sup>3</sup> 8 timer
	MAK-KZGW: 288 mg/m <sup>3</sup>	STEL: 40 ppm 15	Minuten	-	TWA: 40 ppm 8 timer
	15 Minuten	minutter	STEL: 1440 mg/m <sup>3</sup> 15		TWA: 275 mg/m <sup>3</sup> 8 timer
	MAK-TMW: 20 ppm 8	STEL: 144 mg/m <sup>3</sup> 15	Minuten		STEL: 30 ppm 15
	Stunden	minutter	TWA: 50 ppm 8		minutter. value
	MAK-TMW: 72 mg/m <sup>3</sup> 8		Stunden		calculated
	Stunden		TWA: 180 mg/m <sup>3</sup> 8		STEL: 108 mg/m <sup>3</sup> 15
			Stunden		minutter. value
					calculated

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Hexane	TWA: 20 ppm	kože	TWA: 20 ppm 8 hr.	TWA: 20 ppm	TWA: 70 mg/m <sup>3</sup> 8
	TWA: 72.0 mg/m <sup>3</sup>	TWA-GVI: 20 ppm 8	TWA: 72 mg/m <sup>3</sup> 8 hr.	TWA: 72 mg/m <sup>3</sup>	hodinách.
	_	satima.	STEL: 60 ppm 15 min	_	Potential for cutaneous
		TWA-GVI: 72 mg/m <sup>3</sup> 8	STEL: 216 mg/m <sup>3</sup> 15		absorption

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Germany

		satima.	min Skin		Ceiling: 200 mg/m <sup>3</sup>
			SKIII		
Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Hexane	TWA: 20 ppm 8 tundides. TWA: 72 mg/m <sup>3</sup> 8 tundides.	TWA: 20 ppm 8 hr TWA: 72 mg/m³ 8 hr	TWA: 20 ppm TWA: 72 mg/m³	TWA: 72 mg/m³ 8 órában. AK lehetséges borön keresztüli felszívódás	TWA: 20 ppm 8 klukkustundum. TWA: 72 mg/m³ 8 klukkustundum. Ceiling: 40 ppm Ceiling: 144 mg/m³
Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Hexane	TWA: 20 ppm	TWA: 20 ppm IPRD	TWA: 20 ppm 8	TWA: 20 ppm	TWA: 20 ppm 8 ore
	TWA: 72 mg/m³	TWA: 72 mg/m³ IPRD	Stunden TWA: 72 mg/m³ 8 Stunden	TWA: 72 mg/m <sup>3</sup>	TWA: 72 mg/m³ 8 ore
	•				
Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Hovano	TMA: 200 mg/m3 0790	Coiling: 140 mg/m3	TMA: 20 ppm 8 urah	Rinding STEL : 50 ppm	T\\\\A \cdot 20 ppm 8 caa

L	Component	Russia	Slovak Republic	Siovenia	Sweden	Turkey
Γ	Hexane	TWA: 300 mg/m <sup>3</sup> 0780	Ceiling: 140 mg/m <sup>3</sup>	TWA: 20 ppm 8 urah	Binding STEL: 50 ppm	TWA: 20 ppm 8 saat
1		MAC: 900 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup>	TWA: 72 mg/m <sup>3</sup> 8 urah	15 minuter	TWA: 72 mg/m <sup>3</sup> 8 saat
1			TWA: 72 mg/m <sup>3</sup>	STEL: 576 mg/m <sup>3</sup> 15	Binding STEL: 180	
1				minutah	mg/m <sup>3</sup> 15 minuter	
1				STEL: 160 ppm 15	TLV: 20 ppm 8 timmar.	
1				minutah	NGV	
1					TLV: 72 mg/m <sup>3</sup> 8	
L					timmar. NGV	

**United Kingdom** 

# **Biological limit values**

Component

List source(s):

Hexane			2,5-Hexanedione: 5	2,5-Hexanedione: 0.2	2,5-Hexandione plus
			mg/g creatinine urine	mg/L urine end of	4,5-Dihydroxy-2-hexan
			end of shift	workweek	ne (after hydrolysis): 5
					mg/L urine (end of shif
Component	Italy	Finland	Denmark	Bulgaria	Romania
Hexane					2,5-Hexandion: 5 mg/
					Creatinine urine end
					shift
Component	Gibraltar	Latvia	Slovak Republic	Luxembourg	Turkey
Hexane			2,5-Hexanedione: 5	_	
			mg/L urine end of		
			exposure or work shift		
			4,5-Dihydroxy-2-hexano		
			ne: 5 mg/L urine end of		
			exposure or work shift	1	1

**France** 

Spain

# **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

**European Union** 

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

# Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
		•		

# n-Hexane

	(Dermal)	systemic (Dermal)	(Dermal)	systemic (Dermal)
Hexane				DNEL = 11mg/kg
110-54-3 ( <=100 )				bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Hexane 110-54-3 ( <=100 )				DNEL = 75mg/m <sup>3</sup>

#### **Predicted No Effect Concentration (PNEC)**

No information available.

#### 8.2. Exposure controls

# **Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

#### Personal protective equipment

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	> 480 minutes	0.38 - 0.56 mm	Level 6	As tested under EN374-3 Determination of
Viton (R)	> 480 minutes	0.7 mm	EN 374	Resistance to Permeation by Chemicals
Neoprene gloves	< 180 minutes	0.45 mm		·

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, gloves with care avoiding skin contamination.

Respiratory Protection	When workers are facing concentrations above the exposure limit they must use
	appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits

are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to

EN14387

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN

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When RPE is used a face piece Fit Test should be conducted

# Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water

system.

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# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

# 9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Colorless

Odor Petroleum distillates
Odor Threshold No data available
Melting Point/Range -95 °C / -139 °F
Softening Point No data available

Boiling Point/Range69 °C / 156.2 °F@ 760 mmHgFlammability (liquid)Highly flammableOn basis of test data

Flammability (solid,gas) Not applicable Liquid

Explosion Limits Lower 1.1 vol%

Upper 7.5 vol%

Flash Point -22 °C / -7.6 °F Method - No information available

Autoignition Temperature

Decomposition Temperature

pH

Viscosity

223 °C / 433.4 °F

No data available

Not applicable

0.31 mPa s at 20 °C

Water Solubility Immiscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Componentlog PowHexane4.11

Vapor Pressure 160 mbar @ 20 °C

Density / Specific Gravity 0.659

Bulk DensityNot applicableLiquidVapor Density2.97(Air = 1.0)

Particle characteristics Not applicable (liquid)

9.2. Other information

Molecular Formula C6 H14 Molecular Weight 86.18

Explosive Properties Not explosive Vapors may form explosive mixtures with air

# **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous PolymerizationNo information available.Hazardous ReactionsNone under normal processing.

10.4. Conditions to avoid

Incompatible products. Heat, flames and sparks. Exposure to light. Keep away from open

flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Halogens.

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# 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### **Product Information**

(a) acute toxicity:

Based on available data, the classification criteria are not met Oral Based on available data, the classification criteria are not met **Dermal** Inhalation Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexane	LD50 = 25 g/kg (Rat)	LD50 = 3000 mg/kg ( Rabbit )	LC50 = 48000 ppm (Rat) 4 h

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory Based on available data, the classification criteria are not met Skin

Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

Mutagenic effects have occurred in experimental animals

Based on available data, the classification criteria are not met (f) carcinogenicity;

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Category 2

**Reproductive Effects Developmental Effects Teratogenicity** 

Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental effects have occurred in experimental animals. Teratogenic effects have occurred in experimental animals.

(h) STOT-single exposure; Category 3

Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; Category 2

**Target Organs** Skin, Respiratory system, Eyes, Central nervous system (CNS), Heart, Blood, Liver,

Reproductive System, Peripheral Nervous System (PNS).

(i) aspiration hazard; Category 1

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.

Symptoms / effects, both acute and Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

delayed tiredness, nausea and vomiting.

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#### 11.2. Information on other hazards

**Endocrine Disrupting Properties** 

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

# **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic **Ecotoxicity effects** 

environment. The product contains following substances which are hazardous for the

environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Hexane	LC50: 2.1 - 2.98 mg/L, 96h flow-through (Pimephales promelas)	EC50: 3.87 mg/L/48h	

#### 12.2. Persistence and degradability

**Persistence** 

Persistence is unlikely, based on information available.

Degradation in sewage

treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

#### 12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Hexane	4.11	No data available

The product contains volatile organic compounds (VOC) which will evaporate easily from all 12.4. Mobility in soil

surfaces Will likely be mobile in the environment due to its volatility. Disperses rapidly in

air

12.5. Results of PBT and vPvB

assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent

and very bioaccumulative (vPvB).

12.6. Endocrine disrupting

**Endocrine Disruptor Information** 

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

**Persistent Organic Pollutant Ozone Depletion Potential** 

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

# **SECTION 13: DISPOSAL CONSIDERATIONS**

# 13.1. Waste treatment methods

Waste from Residues/Unused

**Products** 

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Dispose of this container to hazardous or special waste collection point. Empty containers **Contaminated Packaging** 

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retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and

empty container away from heat and sources of ignition.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Do not flush to sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not

empty into drains.

Switzerland - Waste Ordinance Disposal should be in accordance with applicable regional, national and local laws and

regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance,

ADWO) SR 814.600

https://www.fedlex.admin.ch/eli/cc/2015/891/en

# **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

14.1. UN numberUN120814.2. UN proper shipping nameHexanes

14.3. Transport hazard class(es) 3 14.4. Packing group II

#### <u>ADR</u>

14.1. UN numberUN120814.2. UN proper shipping nameHexanes14.3. Transport hazard class(es)314.4. Packing groupII

#### IATA

14.1. UN numberUN120814.2. UN proper shipping nameHexanes14.3. Transport hazard class(es)314.4. Packing groupII

14.5. Environmental hazards Dangerous for the environment

Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

# **SECTION 15: REGULATORY INFORMATION**

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

#### **International Inventories**

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Hexane	110-54-3	203-777-6	438-390-3	-	X	X	KE-18626	X	X

# n-Hexane

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Hexane	110-54-3	Х	ACTIVE	X	-	X	Х	Х

Legend: X - Listed '-' - Not Listed KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

# Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		Candidate List of
			Substances	Substances of Very High
				Concern (SVHC)
Hexane	110-54-3	-	Use restricted. See item	-
			75.	
			(see link for restriction	
			details)	

#### **REACH links**

https://echa.europa.eu/substances-restricted-under-reach

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
		Qualifying Quantities for Major Accident	Qualifying Quantities for Safety Report
		Notification	Requirements
Hexane	110-54-3	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

# **National Regulations**

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

#### WGK Classification See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Hexane	WGK2	

Component	France - INRS (Tables of occupational diseases)	
Hexane	Tableaux des maladies professionnelles (TMP) - RG 59,RG 84	

## **Swiss Regulations**

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

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Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Hexane	Prohibited and Restricted	Group I	
110-54-3 ( <=100 )	Substances		

#### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

# **SECTION 16: OTHER INFORMATION**

# Full text of H-Statements referred to under sections 2 and 3

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

H361f - Suspected of damaging fertility

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

H225 - Highly flammable liquid and vapor

## Legend

**CAS** - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

Substances List

**ENCS** - Japanese Existing and New Chemical Substances AICS - Australian Inventory of Chemical Substances

WEL - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

RPE - Respiratory Protective Equipment LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

NZIoC - New Zealand Inventory of Chemicals

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50% POW - Partition coefficient Octanol:Water vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate VOC - (volatile organic compound)

# Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

#### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

First aid for chemical exposure, including the use of eye wash and safety showers.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

**Prepared By** Health, Safety and Environmental Department

**Creation Date** 26-Oct-2009

n-Hexane Revision Date 03-May-2024

Revision Date 03-May-2024

**Revision Summary** New emergency telephone response service provider.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No. 1907/2006

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

#### **Disclaimer**

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**End of Safety Data Sheet**