

Creation Date Oct-2013 Revision Date Oct-2018 Revision Number 2

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

#### 1.1. Product identification

Product Description: Cyclohexane
Product Grade: ER, SQ, HPLC

Cat No.:Q18245, Q18247, Q22855, Q22857, Q2285C, Q43406SynonymsHexahydrobenzene; Benzene hexahydride; Hexamethylene.

 CÁS-NO
 110-82-7

 EC-No.
 203-806-2

 Molecular Formula
 C6 H12

Reach Registration Number 01-2119463273-41

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

Recommended Use Laboratory chemicals. Uses advised against No Information available

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

Company Thermo Fisher Scientific India Pvt. Ltd

403-404, B-wing, Delphi, Hiranandani Business Park,

Powai, Mumbai 400076, INDIA.

E-mail address <u>laboratorysolutions@thermofisher.com</u>

1.4. Emergency telephone number

India Toll Free: 18 00 22 22 30 Chemtrec US: (800)424-9300 Chemtrec EU: 001(202)483-7616

# **SECTION 2: HAZARDS IDENTIFICATION**

### 2.1. Classification of the substance or mixture

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

Physical hazards

Flammable liquids Category 2

**Health hazards** 

Aspiration Toxicity
Skin Corrosion/irritation
Specific target organ toxicity - (single exposure)
Category 2
Category 3

**Environmental hazards** 

Acute aquatic toxicity
Chronic aquatic toxicity
Category 1
Category 1

# 2.2. Label elements

Cyclohexane Revision Date Oct-2018



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

H410 - Very toxic to aquatic life with long lasting effects

### **Precautionary Statements**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - 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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

### 2.3. Other hazards

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

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

### 3.1. Substances

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Cyclohexane	110-82-7	EEC No. 203-806-2	>95	Flam. Liq. 2 (H225) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Reach Registration Number	01-2119463273-41

Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

### 4.1. Description of first aid measures

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

Obtain medical attention.

**Skin Contact** Wash off immediately with soap and plenty of water for at least 15 minutes. Obtain medical

attention.

Ingestion Do not induce vomiting. Aspiration hazard. Call a physician or Poison Control Center

immediately.

Cyclohexane Revision Date Oct-2018

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if

victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Aspiration into lungs can produce severe lung damage. Get medical attention immediately if

symptoms occur.

Protection of First-aiders 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

Breathing difficulties. Symptoms of overexposure may be 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.

# **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

#### Suitable Extinguishing Media

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

### 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. Do not allow run-off from fire fighting to enter drains or water courses.

### **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. Thermal decomposition can lead to release of irritating gases and vapors.

# **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

#### 6.2. Environmental precautions

Avoid release to the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

# 6.3. Methods and material for containment and cleaning up

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

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

Cyclohexane Revision Date Oct-2018

# **SECTION 7: HANDLING AND STORAGE**

### 7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. 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 before re-use. Wash hands before breaks and at the end of workday.

#### 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 and sources of ignition. Flammables area.

### 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 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	European Union	The United Kingdom	France	Belgium	Spain
Cyclohexane	TWA: 200 ppm 8 hr	STEL: 300 ppm 15 min	TWA / VME: 200 ppm (8	TWA: 100 ppm 8 uren	TWA / VLA-ED: 200
	TWA: 700 mg/m <sup>3</sup> 8 hr	STEL: 1050 mg/m <sup>3</sup> 15	heures). restrictive limit	TWA: 350 mg/m <sup>3</sup> 8 uren	ppm (8 horas)
	_	min	TWA / VME: 700 mg/m <sup>3</sup>	_	TWA / VLA-ED: 700
		TWA: 100 ppm 8 hr	(8 heures). restrictive		mg/m³ (8 horas)
		TWA: 350 mg/m <sup>3</sup> 8 hr	limit TWA / VME: 1000		
			mg/m³ (8 heures).		
			STEL / VLCT: 375 ppm.		
			STEL / VLCT: 1300		
			mg/m <sup>3</sup> . STEL / VLCT:		
			1500 mg/m³.		

Component	Italy	Germany	Portugal	The Netherlands	Finland
Cyclohexane	TWA: 100 ppm 8 ore. Media Ponderata nel Tempo TWA: 350 mg/m³ 8 ore. Media Ponderata nel Tempo	TWA: 200 ppm (8 Stunden). AGW - exposure factor 4 TWA: 700 mg/m³ (8 Stunden). AGW - exposure factor 4 TWA: 200 ppm (8 Stunden). MAK TWA: 700 mg/m³ (8 Stunden). MAK Höhepunkt: 800 ppm Höhepunkt: 2800 mg/m³	TWA: 200 ppm 8 horas TWA: 700 mg/m³ 8 horas	STEL: 1400 mg/m³ 15 minuten TWA: 700 mg/m³ 8 uren	TWA: 100 ppm 8 tunteina TWA: 350 mg/m³ 8 tunteina STEL: 250 ppm 15 minuutteina STEL: 875 mg/m³ 15 minuutteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Cyclohexane	MAK-KZW: 800 ppm 15	TWA: 50 ppm 8 timer	STEL: 800 ppm 15	STEL: 1000 mg/m <sup>3</sup> 15	TWA: 150 ppm 8 timer
	Minuten	TWA: 172 mg/m <sup>3</sup> 8 timer	Minuten	minutach	TWA: 525 mg/m <sup>3</sup> 8 timer
	MAK-KZW: 2800 mg/m <sup>3</sup>	_	STEL: 2800 mg/m <sup>3</sup> 15	TWA: 300 mg/m <sup>3</sup> 8	STEL: 150 ppm 15

Cyclohexane Revision Date Oct-2018

O Statusti		15 Minuten MAK-TMW: 200 ppm 8 Stunden MAK-TMW: 700 mg/m³ 8 Stunden		Minuten TWA: 200 ppm 8 Stunden TWA: 700 mg/m³ 8 Stunden	godzinach	minutter. STEL: 525 mg/m³ 15 minutter.
------------	--	--	--	---	-----------	--

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Cyclohexane	TWA: 200 mg/m <sup>3</sup> TWA: 700.0 ppm	TWA-GVI: 200 ppm 8 satima. TWA-GVI: 700 mg/m³ 8 satima.	TWA: 200 ppm 8 hr. TWA: 700 mg/m³ 8 hr. STEL: 600 ppm 15 min STEL: 2100 mg/m³ 15 min	TWA: 200 ppm TWA: 700 mg/m <sup>3</sup>	TWA: 700 mg/m³ 8 hodinách. Ceiling: 2000 mg/m³

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Cyclohexane	TWA: 200 ppm 8 tundides. TWA: 700 mg/m <sup>3</sup> 8 tundides.	TWA: 200 ppm 8 hr TWA: 700 mg/m <sup>3</sup> 8 hr	TWA: 200 ppm TWA: 700 mg/m <sup>3</sup>	TWA: 700 mg/m³ 8 órában. AK	TWA: 50 ppm 8 klukkustundum. TWA: 175 mg/m³ 8 klukkustundum. Ceiling: 100 ppm Ceiling: 350 mg/m³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Cyclohexane	TWA: 23 ppm TWA: 80 mg/m <sup>3</sup>	TWA: 200 ppm IPRD TWA: 700 mg/m³ IPRD	TWA: 200 ppm 8 Stunden TWA: 700 mg/m³ 8 Stunden	TWA: 200 ppm TWA: 700 mg/m <sup>3</sup>	TWA: 200 ppm 8 ore TWA: 700 mg/m <sup>3</sup> 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Cyclohexane	MAC: 80 mg/m <sup>3</sup>	TWA: 200 ppm TWA: 700 mg/m <sup>3</sup>	TWA: 200 ppm 8 urah TWA: 700 mg/m³ 8 urah	STV: 370 ppm 15 minuter STV: 1300 mg/m³ 15 minuter LLV: 300 ppm 8 timmar. LLV: 1000 mg/m³ 8 timmar.	TWA: 200 ppm 8 saat TWA: 700 mg/m³ 8 saat

### **Biological limit values**

List source(s):

Component	European Union	United Kingdom	France	Spain	Germany
Cyclohexane					Total
					1,2-Cyclohexandiol: 150
					mg/g urine (end of shift
					after
					hydrolysis;measured as
					mg/g Creatinine)
					Total
					1,2-Cyclohexandiol: 150
					mg/g urine (end of
					several shifts after
					hydrolysis;measured as
					mg/g Creatinine;for
					long-term exposures)

# **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

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) See table for values

Cyclohexane Revision Date Oct-2018

Route of exposure	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Oral				
Dermal				2016 mg/kg/day
Inhalation	700 mg/m <sup>3</sup>	700 mg/m <sup>3</sup>	700 mg/m <sup>3</sup>	700 mg/m <sup>3</sup>

Predicted No Effect Concentration See values below.

(PNEC)

Fresh water 0.207 mg/l
Fresh water sediment 3.627 mg/kg
Marine water 0.207 mg/l
Marine water sediment 3.627 mg/kg
Microorganisms in sewage treatment 3.24 mg/l

#### 8.2. Exposure controls

Soil (Agriculture)

#### **Engineering Measures**

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

2.99 mg/kg

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** Safety glasses with side-shields (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	< 240 minutes	0.45 mm		

- -

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure 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.

Remove 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

141

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. Local authorities should be advised if significant spillages cannot be contained.

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

### 9.1. Information on basic physical and chemical properties

Revision Date Oct-2018 Cyclohexane

**Appearance** Colorless **Physical State** Liquid

sweet Odor

**Odor Threshold** No data available No information available Hq 6.5 °C / 43.7 °F Melting Point/Range No data available **Softening Point Boiling Point/Range** 81 °C / 177.8 °F

-18 °C / -0.4 °F **Flash Point** Method - Closed cup (Butyl Acetate = 1.0) 6.1 **Evaporation Rate** 

Not applicable Liquid Flammability (solid,gas)

**Explosion Limits** Lower 1.2 vol% Upper 8.4 vol%

104 mbar @ 20 °C

**Vapor Pressure** 

2.90 **Vapor Density** (Air = 1.0)Specific Gravity / Density 0.770

Not applicable **Bulk Density** Liquid practically insoluble 0.052 g/l **Water Solubility** 

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

log Pow Component Cyclohexane 3.44

**Autoignition Temperature** 260 °C / 500 °F **Decomposition Temperature** No data available 0.94 mPa.s @ 20 °C **Viscosity** 

No information available Vapors may form explosive mixtures with air **Explosive Properties** 

**Oxidizing Properties** No information available

9.2. Other information

Molecular Formula C6 H12 **Molecular Weight** 84.15

# **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 Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and

sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

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

# **SECTION 11: TOXICOLOGICAL INFORMATION**

### 11.1. Information on toxicological effects

Cyclohexane Revision Date Oct-2018

**Product Information** 

(a) acute toxicity;

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

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation		
Cyclohexane	> 5000 mg/kg (Rat)	> 2000 mg/kg(Rabbit)	LC50 = 13.9 mg/L (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;

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

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

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

There are no known carcinogenic chemicals in this product

Based on available data, the classification criteria are not met (g) reproductive toxicity;

Category 3 (h) STOT-single exposure;

Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

**Target Organs** No information available.

(j) aspiration hazard; Category 1

delayed

Symptoms / effects, both acute and Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

# **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

**Ecotoxicity effects** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the

environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Cyclohexane	Freshwater Fish  LC50: 48.87 - 68.76 mg/L, 96h static (Poecilia reticulata) LC50: 24.99 - 44.69 mg/L, 96h static (Lepomis macrochirus) LC50: 23.03 - 42.07 mg/L, 96h static (Pimephales promelas) LC50: 3.96 - 5.18 mg/L, 96h flow-through	<b>Water Flea</b> EC50 = 0.9 mg/l/48h		Microtox EC50 = 85.5 mg/L 5 min EC50 = 93 mg/L 10 min
	(Pimephales promelas)			

Revision Date Oct-2018 Cyclohexane

12.2. Persistence and degradability Readily biodegradable

Persistence is unlikely, based on information available. Persistence

Component	Degradability
Cyclohexane	77% (28d)
110-82-7 ( >95 )	

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)		
	Cyclohexane	3.44	83.15		

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

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

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. Other adverse effects

**Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential** 

This product does not contain any known or suspected endocrine disruptors

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.

**Contaminated Packaging** 

Dispose of this container to hazardous or special waste collection point. Empty containers 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 Catalogue, Waste Codes are not product specific, but

application specific.

Other Information

Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into

drains.

### SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

UN1145 14.1. UN number 14.2. UN proper shipping name Cyclohexane

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

**ADR** 

14.1. UN number UN1145 14.2. UN proper shipping name Cyclohexane

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

IATA

14.1. UN number UN1145 14.2. UN proper shipping name Cyclohexane

Cyclohexane Revision Date Oct-2018

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

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. Transport in bulk according to Not applicable, packaged goods

Annex II of MARPOL73/78 and the

**IBC Code** 

# **SECTION 15: REGULATORY INFORMATION**

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

International Inventories X = listed

			-								
Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Cyclohexane	203-806-2	-		X	Х	-	Х	Χ	Х	Х	Х

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Cyclohexane		Use restricted. See item 57.	
		(see	
		http://eur-lex.europa.eu/LexUriServ/L	
		exUriServ.do?uri=CELEX:32006R190	
		7:EN:NOT for restriction details)	

### **National Regulations**

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Cyclohexane	WGK 2	

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

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

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

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

### 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-/EUH-Statements Referred to Under Section 3

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

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

### 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

Substances List

Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances ENCS - Japanese Existing and New Chemical Substances

**FSUC8921** 

Cyclohexane Revision Date Oct-2018

IECSC - Chinese Inventory of Existing Chemical Substances AICS - Australian Inventory of Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances NZIoC - New Zealand Inventory of Chemicals

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

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

Key literature references and sources for data

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

ATE - Acute Toxicity Estimate VOC - Volatile Organic Compounds

**Transport Association** 

TWA - Time Weighted Average

EC50 - Effective Concentration 50%

LD50 - Lethal Dose 50%

IARC - International Agency for Research on Cancer

ICAO/IATA - International Civil Aviation Organization/International Air

MARPOL - International Convention for the Prevention of Pollution from

PNEC - Predicted No Effect Concentration

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

**Training Advice** 

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

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

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

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

**Creation Date** Oct-2013 **Next Revision Date** Oct-2023

**Revision Summary** SDS section 1 updated and update of Format

# This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

# Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

# **End of Safety Data Sheet**