

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 02-Jan-2024 Revision Number 1

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

1.1. Product identifier

Product Code(s) DRE-L13320000CY

Product Name Ethylbenzene 10 μg/mL in Cyclohexane

Form Not applicable

Unique Formula Identifier (UFI) 0UYR-A0VH-U00H-Y7R0

Pure substance/mixture Mixture

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

Recommended use Laboratory use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Limited Queens Road Teddington Middlesex TW11 0LY UNITED KINGDOM :+44 (0) 20 8943 7000 Fax :+44 (0) 20 8943 2767 eMail : gb@lgcstandards.com

Web: www.lgcstandards.com

For further information, please contact

E-mail address sds-request@lgcgroup.com

1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident

Spill, Leak, Fire Exposure, or Accident

Call CHEMTREC:

USA & Canada 1-800-424-9300 Rest of the world +1 703-741-5970

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Emergency Telephone - §45 - (EC)1272/2008					
Europe	112				
Austria	No information available				
Bulgaria					
Croatia					
Cyprus					
Czech Republic					
Denmark					
France					
Hungary					
Ireland					
Italy					
Lithuania					
Luxembourg					
Netherlands					
Norway					
Portugal					
Romania					
Slovakia					
Slovenia					
Spain					
Sweden					
Switzerland					

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture Classification according to

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

Aspiration hazard	Category 1 - (H304)
Skin corrosion/irritation	Category 2 - (H315)
Specific target organ toxicity — single exposure	Category 3 - (H336)
Category 3 Narcotic effects	
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Flammable liquids	Category 2 - (H225)

2.2. Label elements

Contains Cyclohexane

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Signal word Danger

Hazard statements

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

H225 - Highly flammable liquid and vapour

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P273 - Avoid release to the environment

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting

P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish

P391 - Collect spillage

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

2.3. Other hazards

No information available.

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

 Endocrine Disruptor Information
 This product does not contain any known or suspected endocrine disruptors.

 Chemical name
 EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation
 EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances

 Cyclohexane
 Substances

 Ethylbenzene

SECTION 3: Composition/information on ingredients

3.1 Substances

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Not applicable

3.2 Mixtures

Chemical nature

Mixture of organic compounds.

Chemical name	Weight-%	REACH registration number	`	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Cyclohexane 110-82-7	80 - 100	-	203-806-2	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)			
Ethylbenzene 100-41-4	<0.1	<u>-</u>	202-849-4	Flam. Liq. 2 (H225) Acute Tox. 4 (H332) Carc. 2 (H351) STOT RE 2 (H373) Asp. Tox. 1 (H304)			

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

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

-	Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
١			mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
	Cyclohexane 110-82-7	12705	2000	32.88	No data available	No data available
	Ethylbenzene 100-41-4	3500	15400	17.4	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

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4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Inhalation Remove to fresh air. Aspiration into lungs can produce severe lung damage. If breathing

has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention. Delayed

pulmonary edema may occur.

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

eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes

and shoes. Get medical attention if irritation develops and persists.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious

person. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Get immediate medical attention.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s)

involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin,

eyes or clothing.

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

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Inhalation of high vapour

concentrations may cause symptoms like headache, dizziness, tiredness, nausea and

vomiting.

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

Note to doctors Because of the danger of aspiration, emesis or gastric lavage should not be used unless the

risk is justified by the presence of additional toxic substances.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

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Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the

product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if

safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A

vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand

or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

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6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations

Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children. Store away from other materials. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Cyclohexane	TWA: 200 ppm	TWA: 200 ppm	TWA: 100 ppm	TWA: 200 ppm	TWA: 200 ppm
110-82-7	TWA: 700 mg/m ³	TWA: 700 mg/m ³	TWA: 350 mg/m ³	TWA: 700.0 mg/m ³	TWA: 700 mg/m ³
		STEL 800 ppm		_	*
		STEL 2800 mg/m ³			
Ethylbenzene	TWA: 100 ppm	TWA: 100 ppm	TWA: 20 ppm	STEL: 545 mg/m ³	TWA: 100 ppm
100-41-4	TWA: 442 mg/m ³	TWA: 440 mg/m ³	TWA: 87 mg/m ³	TWA: 435 mg/m ³	TWA: 442 mg/m ³
	STEL: 200 ppm	STEL 200 ppm	STEL: 125 ppm	K*	STEL: 200 ppm
	STEL: 884 mg/m ³	STEL 880 mg/m ³	STEL: 551 mg/m ³		STEL: 884 mg/m ³
	*	H*	*		*
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Cyclohexane	TWA: 200 ppm	TWA: 700 mg/m ³	TWA: 50 ppm	TWA: 200 ppm	TWA: 100 ppm
110-82-7	TWA: 700 mg/m ³	Ceiling: 2000 mg/m ³	TWA: 172 mg/m ³	TWA: 700 mg/m ³	TWA: 350 mg/m ³
					STEL: 250 ppm
					STEL: 875 mg/m ³
Ethylbenzene	*	TWA: 200 mg/m ³	TWA: 50 ppm	TWA: 100 ppm	TWA: 50 ppm
100-41-4	STEL: 200 ppm	Ceiling: 500 mg/m ³	TWA: 217 mg/m ³	TWA: 442 mg/m ³	TWA: 220 mg/m ³
	STEL: 884 mg/m ³	*	H*	STEL: 200 ppm	STEL: 200 ppm
	TWA: 100 ppm			STEL: 884 mg/m ³	STEL: 880 mg/m ³
	TWA: 442 mg/m ³			Α*	iho*
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Cyclohexane	TWA: 200 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA: 700 mg/m ³
110-82-7	TWA: 700 mg/m ³	TWA: 700 mg/m ³	TWA: 700 mg/m ³	TWA: 700 mg/m ³	
	STEL: 375 ppm		Peak: 800 ppm		
	STEL: 1300 mg/m ³		Peak: 2800 mg/m ³		
Ethylbenzene	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm	TWA: 100 ppm	TWA: 442 mg/m ³
100-41-4	TWA: 88.4 mg/m ³	TWA: 88 mg/m ³	TWA: 88 mg/m ³	TWA: 435 mg/m ³	STEL: 884 mg/m ³
	STEL: 100 ppm	H*	Peak: 40 ppm	STEL: 125 ppm	*
	STEL: 442 mg/m ³		Peak: 176 mg/m ³	STEL: 545 mg/m ³	
	*		*		
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Cyclohexane	TWA: 200 ppm	TWA: 100 ppm	TWA: 100 ppm	TWA: 23 ppm	TWA: 200 ppm
110-82-7	TWA: 700 mg/m ³	TWA: 350 mg/m ³	TWA: 344 mg/m ³	TWA: 80 mg/m ³	TWA: 700 mg/m ³
	STEL: 600 ppm		-		
	STEL: 2100 mg/m ³				
Ethylbenzene	TWA: 100 ppm	TWA: 100 ppm	TWA: 20 ppm	TWA: 100 ppm	*
100-41-4	TWA: 442 mg/m ³	TWA: 442 mg/m ³	TWA: 87 mg/m ³	TWA: 442 mg/m ³	TWA: 100 ppm
	STEL: 200 ppm	STEL: 200 ppm		STEL: 200 ppm	TWA: 442 mg/m ³
	STEL: 884 mg/m ³	STEL: 884 mg/m ³		STEL: 884 mg/m ³	STEL: 200 ppm
	Sk*	pelle*		*	STEL: 884 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland

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	1		r	1			
Cyclohexane		A: 200 ppm	TWA: 200 ppm	TWA: 700 mg/m ³		150 ppm	STEL: 1000 mg/m ³
110-82-7	TWA	: 700 mg/m ³	TWA: 700 mg/m ³	STEL: 1400 mg/m ³		525 mg/m ³	TWA: 300 mg/m ³
					STEL: '	187.5 ppm	*
					STEL: 65	6.25 mg/m ³	
Ethylbenzene		*	*	TWA: 215 mg/m ³	TWA	: 5 ppm	STEL: 400 mg/m ³
100-41-4	STE	L: 200 ppm	STEL: 200 ppm	STEL: 430 mg/m ³	TWA:	20 mg/m ³	TWA: 200 mg/m ³
	STE	_: 884 mg/m ³	STEL: 884 mg/m ³	H*	STEL	: 10 ppm	*
	TW	A: 100 ppm	TWA: 100 ppm			30 mg/m ³	
		: 442 mg/m ³	TWA: 442 mg/m ³			H* Ŭ	
Chemical name		Portugal	Romania	Slovakia	Slo	venia	Spain
Cyclohexane	TW	A: 200 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA:	200 ppm	TWA: 200 ppm
110-82-7	TWA	: 700 mg/m ³	TWA: 700 mg/m ³	TWA: 700 mg/m ³	TWA: 7	'00 mg/m ³	TWA: 700 mg/m ³
					STEL: 2	800 mg/m ³	-
					STEL:	800 ppm	
Ethylbenzene	TWA: 100 ppm		TWA: 100 ppm	TWA: 100 ppm	TWA: 100 ppm		TWA: 100 ppm
100-41-4		: 442 mg/m ³	TWA: 442 mg/m ³	TWA: 442 mg/m ³	TWA: 4	42 mg/m ³	TWA: 441 mg/m ³
		L: 200 ppm	STEL: 200 ppm	*		STEL ppm	STEL: 200 ppm
	STEI	_: 884 mg/m ³	STEL: 884 mg/m ³	Ceiling: 884 mg/m ³	STEL: S	TEL mg/m ³	STEL: 884 mg/m ³
		P*	*			*	vía dérmica*
Chemical name		Sı	weden	Switzerland		Uni	ted Kingdom
Cyclohexane		NGV:	200 ppm			TV	/A: 100 ppm
110-82-7			700 mg/m ³	TWA: 700 mg/n			A: 350 mg/m ³
			•	STEL: 800 ppn			EL: 300 ppm
			STEL: 2800 mg/			_: 1050 mg/m³	
Ethylbenzene	ene NGV		: 50 ppm	TWA: 50 ppm		TV	/A: 100 ppm
100-41-4	100-41-4 NGV: 2		220 mg/m ³	TWA: 220 mg/n	n ³	TW	A: 441 mg/m ³
			KGV: 200 ppm	STEL: 50 ppm		STI	EL: 125 ppm
		Bindande K	GV: 884 mg/m ³	STEL: 220 mg/r	n³		L: 552 mg/m ³
			*	H*			Sk*

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Cyclohexane	-	-	=	150 mg/g Creatinine	-
110-82-7				- urine	
				(1,2-Cyclohexanedi	
				ol) - at the end of the	
				work shift; at chronic	
				exposure after	
				several successive	
				shifts	
				450 μg/L - blood	
				(Cyclohexanol) -	

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	1	,			
				during exposure	
				3.20 mg/g Creatinine	
				- urine	
				(Cyclohexanol) -	
				during the second	
				half of the work shift	
Ethylbenzene	_	_	2000 mg/g	1.50 mg/L - blood	1100 µmol/mmol
100-41-4			Creatinine - urine	(Ethylbenzene) -	Creatinine (urine -
100 11 1			(Mandelic acid and		Mandelic acid end of
			Phenylglyoxylic acid	1 50 g/g Creatinine -	shift)
			total) at the and of	urine (Mandelic acid)	
				- at the end of the	
			exposure or end of		Creatinine (urine -
			work shift		Mandelic acid end of
				end of the working	shift)
				week	
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Cyclohexane	-	-	-	150 mg/g Creatinine	150 mg/g Creatinine
110-82-7				(urine - total	(urine - total
					1,2-Cyclohexanediol
				(after hydrolysis) end	(after hydrolysis) end
				of shift)	of shift)
				150 mg/g Creatinine	150 mg/g Creatinine
				(urine - total	(urine - total
				1,2-Cyclohexanediol	1,2-Cyclohexanediol
					(after hydrolysis) for
				\ long-term	` long-term
				exposures: at the	exposures: at the
					end of the shift after
				several shifts)	several shifts)
				150 mg/g Creatinine	oovorar orinto)
				- BAT (for long-term	
				exposures: at the	
				end of the shift after	
				several shifts) urine	
Ethylbonzono		5.2 mmol/L (urine -	1500 mg/g orostinino	250 mg/g Creatinine	250 ma/a Croatinina
Ethylbenzene	-				
100-41-4		Mandelic acid after	- urine (Mandelic	(urine - Mandelic	(urine - Mandelic
		the shift after a	acid) - end of shift at		acid plus
		working week or	end of workweek	Phenylglyoxylic acid	
		exposure period)		end of shift)	end of shift)
				250 mg/g Creatinine	
				- BAT (end of	
				exposure or end of	
				shift) urine	
				130 mg/g Creatinine	
				- (end of exposure	
1		1	l	or end of shift) -	1

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	,	·	· · · · · · · · · · · · · · · · · · ·	
			urine 250 mg/g Creat	tining
			- (end of expo	
			or end of shif	
			urine	7
			330 mg/g Creat	tinine
			- (end of expo	
			or end of shif	t) -
			urine	
			670 mg/g Creat	
			- (end of expo	
			or end of shif	t) -
			urine 1300 mg/g	
			Creatinine - (e	
			exposure or er	
			shift) - urine	
Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII
Ethylbenzene		0.7 g/g Creatinine (urine -		0.15 g/g Creatinine - urine
100-41-4		sum of Mandelic acid and		(Sum of Mandelic acid
	end of workweek, end of	Phenylglyoxylic acid end		and Phenylglyoxylic acid)
	shift)	of shift at end of		- end of shift at end of
	1110 µmol/mmol	workweek)		workweek
	Creatinine (urine -	0.7 g (end-exhaled air -		
	Mandelic acid at end of	not critical)		
Chemical name	workweek, end of shift) Latvia	Luxembourg	Romania	Slovakia
Ethylbenzene	Latvia	- Luxeribourg	- Nomania	12 mg/L (urine - 2 and
100-41-4			_	4-Ethylphenol end of
				exposure or work shift)
				1600 mg/L (urine - ´
				Mandelic acid and
				Phenylglycolic acid end of
		_		exposure or work shift)
Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Cyclohexane 110-82-7	150 mg/g Creatinine - urine	-	150 mg/g creatinine (urine - total	-
	(1,2-Cyclohexanediol		1,2-Cyclohexanediol end	
	(after hydrolysis)) - at the		of shift, and after several	
	end of the work shift; for		shifts (for long-term	
	long-term exposure: at the		exposures))	
	end of the work shift after		146 µmol/mmol creatinine	
	several consecutive		(urine - total	
	workdays		1,2-Cyclohexanediol end of shift, and after several	
			shifts (for long-term	
			I simis for long-term	

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			exposures))	
Ethylbenzene	250 mg/g Creatinine -	700 mg/g Creatinine	600 mg/g creatinine (urine	-
100-41-4	urine (Mandelic acid and	(urine - Mandelic acid plus	 Mandelic acid and 	
	Phenylglyoxylic acid) - at	Phenylglyoxylic acid end	Phenylglyoxylacid end of	
	the end of the work shift	of workweek)	shift)	

Derived No Effect Level (DNEL)
Predicted No Effect Concentration
(PNEC)

No information available. No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Avoid contact with eyes. Wear safety glasses with side shields

(or goggles).

Hand protection Wear protective nitrile rubber gloves. Wear suitable gloves. Impervious gloves. The

protective gloves to be used must comply with the specifications of EC Directive

89/686/EEC and the related standard EN374.

Skin and body protectionLong sleeved clothing. Chemical resistant apron. Antistatic boots. Wear suitable protective

clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of

equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear

suitable gloves and eye/face protection.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateLiquidAppearanceLiquidColourcolourlessOdourOdourless.

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Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing point6.5 °CNone knownInitial boiling point and boiling range80.72 °CNone knownFlammabilityNo data availableNone knownFlammability Limit in AirNone known

Upper flammability or explosive 9,3 Vol% - 326 g/m³

limits

Lower flammability or explosive 1 Vol% - 35 g/m³

limits

Flash point-20 °CNone knownAutoignition temperature260 °CNone knownDecomposition temperatureNone known

pH No data available None known
pH (as aqueous solution) No data available No information available

Kinematic viscosity No data available None known @ 20°C **Dynamic viscosity** 0.894 mPas Water solubility No data available None known No data available None known Solubility(ies) **Partition coefficient** 3.44 None known 103 hPa @ 20°C Vapour pressure Relative density 0.78 None known

Bulk density
No data available
Liquid Density
No data available

Relative vapour density 2.9 None known

Particle characteristics

Particle Size No information available Particle Size Distribution No information available

9.2. Other information

9.2.1. Information with regards to physical hazard classes Not applicable

9.2.2. Other safety characteristics No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

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Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None. **Sensitivity to static discharge** Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Aspiration into lungs can

produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Eye contact Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact Repeated exposure may cause skin dryness or cracking. Specific test data for the

substance or mixture is not available. Causes skin irritation. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Potential for aspiration if

swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness

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and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

 ATEmix (oral)
 99,999.00
 mg/kg

 ATEmix (dermal)
 99,999.00
 mg/kg

 ATEmix (inhalation-gas)
 99,999.00
 ppm

 ATEmix (inhalation-dust/mist)
 99,999.00
 mg/l

 ATEmix (inhalation-vapour)
 99,999.00
 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Cyclohexane	= 12705 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 32.88 mg/L (Rat)4 h
Ethylbenzene	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.4 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritationClassification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
Ethylbenzene	Muta. 1B

Carcinogenicity No information available.

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Reproductive toxicity No information available.

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure No information available.

Aspiration hazard May be fatal if swallowed and enters airways.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicityContains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
			microorganisms	
Cyclohexane	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: 3.96 - 5.18mg/L (96h, Pimephales promelas) LC50: 23.03 - 42.07mg/L (96h, Pimephales promelas) LC50: 24.99 - 44.69mg/L (96h, Lepomis macrochirus) LC50: 48.87 - 68.76mg/L (96h, Poecilia reticulata)	<u>-</u>	EC50: 3.78mg/L (48h, Daphnia magna)
Ethylbenzene	EC50: 1.7 - 7.6mg/L (96h,		-	EC50: 1.8 - 2.4mg/L (48h,
	Pseudokirchneriella	(96h, Oncorhynchus		Daphnia magna)

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subcapitata)	mykiss)	T
. ,	LC50: 7.55 - 11mg/L (96h,	l
(72h, Pseudokirchneriella		Ί
subcapitata)	LC50: 9.1 - 15.6mg/L	I
EC50: =11mg/L (72h,	(96h, Pimephales	l
Pseudokirchneriella	promelas)	١
subcapitata)	LC50: =32mg/L (96h,	
EC50: =4.6mg/L (72h,	Lepomis macrochirus)	l
Pseudokirchneriella	LC50: =4.2mg/L (96h,	l
subcapitata)	Oncorhynchus mykiss)	l
EC50: >438mg/L (96h,	LC50: =9.6mg/L (96h,	l
Pseudokirchneriella	Poecilia reticulata)	l
subcapitata)		l

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Cyclohexane	3.44
Ethylbenzene	3.15

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Cyclohexane	The substance is not PBT / vPvB
Ethylbenzene	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

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No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused

Contaminated packaging

products

Should not be released into the environment. Dispose of in accordance with local

regulations. Dispose of waste in accordance with environmental legislation.

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

14.1 UN number or ID number UN1145

14.2 UN proper shipping name Cyclohexane mixture

14.3 Transport hazard class(es) 3

14.4 Packing group

Description UN1145, Cyclohexane mixture, 3, II

14.5 Environmental hazards

14.6 Special precautions for user

Special Provisions None **ERG Code** 3H

IMDG

14.1 UN number or ID number UN1145

Cyclohexane mixture 14.2 UN proper shipping name

14.3 Transport hazard class(es) 14.4 Packing group

UN1145, Cyclohexane mixture, 3, II, (-20°C c.c.), Marine pollutant Description

No information available

14.5 Marine pollutant Р

Environmental hazards Yes

14.6 Special precautions for user

Special Provisions None

EmS-No. F-E, S-D No information available

14.7 Maritime transport in bulk

according to IMO instruments

RID 14.1 UN number or ID number UN1145

14.2 UN proper shipping name Cyclohexane mixture

14.3 Transport hazard class(es)

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14.4 Packing group

Description UN1145, Cyclohexane mixture, 3, II, Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions None **Classification code** F1

ADR

14.1 UN number or ID number UN1145

14.2 UN proper shipping name Cyclohexane mixture

14.3 Transport hazard class(es)14.4 Packing group

Description UN1145, Cyclohexane mixture, 3, II, (D/E), Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special ProvisionsNoneClassification codeF1Tunnel restriction code(D/E)

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Cyclohexane 110-82-7	RG 84	-
Ethylbenzene 100-41-4	RG 84	-

Water hazard class (WGK) obviously hazardous to water (WGK 2)

Poland SDS created according to the following Polish regulation: Act of February 25, 2011 on

chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and

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method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650) . Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

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.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors Not applicable

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Cyclohexane - 110-82-7	57. 75.	

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

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Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Complies

DSL/NDSL
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
ENCS
Contact supplier for inventory compliance status
IECSC
Contact supplier for inventory compliance status
KECL
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
AIIC
Contact supplier for inventory compliance status

Legend:

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

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment is not required for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H225 - Highly flammable liquid and vapour

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H351 - Suspected of causing cancer

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

H400 - Very toxic to aquatic life

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H410 - Very toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value Sk* Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method
Flammable liquids	On basis of test data

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

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National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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End of Safety Data Sheet

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