

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 1 of 12

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

1.1. Product identifier

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH Street: Stempelstraße 6 Place: D-47167 Duisburg

Telephone: 0203/5194-0 Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,

number: Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada:

1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls

accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Repr. 2; H361f STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

ethanediol cyclohexylamine

Signal word: Danger

Pictograms:









Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 2 of 12

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H361f Suspected of damaging fertility.

H373 May cause damage to kidneys through prolonged or repeated exposure if swallowed.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

protection.

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

water or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Chemical name				
	EC No	Index No REACH No				
	Classification (Regulation (EC)	No 1272/2008)				
107-21-1	ethanediol					
	203-473-3	603-027-00-1	01-2119456816-28			
	Acute Tox. 4, STOT RE 2; H302 H373					
108-91-8	8 cyclohexylamine		5 - < 10 %			
	203-629-0	612-050-00-6				
	Flam. Liq. 3, Repr. 2, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B; H226 H361f H311 H301 H314					

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	
	Specific Conc. I	Specific Conc. Limits, M-factors and ATE	
107-21-1	203-473-3	ethanediol	90 - < 95 %
	dermal: LD50 = > 3500 mg/kg; oral: LD50 = 7712 mg/kg		
108-91-8	203-629-0	cyclohexylamine	5 - < 10 %
	dermal: ATE =	300 mg/kg; oral: ATE = 100 mg/kg	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air. Medical treatment necessary.



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 3 of 12

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant — skin irritation and eye damage

Causes burns.

Risk of serious damage to eyes.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NOx)

Carbon monoxide

Carbon dioxide (CO2)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 4 of 12

For emergency responders

Precautionary statements For emergency responders: Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

Clean contaminated articles and floor according to the environmental legislation.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Provide adequate ventilation.

Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Provide adequate ventilation as well as local exhaustion at critical locations.

Keep in a cool place.

Further information on storage conditions

Keep cool. Protect from sunlight.

7.3. Specific end use(s)

Laboratory chemicals



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 5 of 12

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
108-91-8	Cyclohexylamine	10	40		TWA (8 h)	
107-21-1	Ethylene glycol, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance				
DNEL type		Exposure route	Effect	Value	
107-21-1	107-21-1 ethanediol				
Consumer DNEL, long-term		inhalation	local	7 mg/m³	
Consumer DNEL, long-term		dermal	systemic	53 mg/kg bw/day	
Worker DNEL, long-term		inhalation	local	35 mg/m³	
Worker DNEL, long-term		dermal	systemic	106 mg/kg bw/day	

PNEC values

CAS No	Substance	
Environmental compartment		Value
107-21-1	ethanediol	
Freshwater		10 mg/l
Freshwater (i	intermittent releases)	10 mg/l
Marine water		1 mg/l
Freshwater sediment		37 mg/kg
Marine sediment		3,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		199,5 mg/l
Soil		1,53 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection:

Face protection shield goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 6 of 12

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 890 Vitoject®
Suitable material: FKM (fluoro rubber) 0,7 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 898 Butoject®

Suitable material: Butyl caoutchouc (butyl rubber) 0,7 mm Wearing time with occasional contact (splashes): > 120 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols. In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid Colour: clear

Odour: characteristic
Odour threshold: No data available

Melting point/freezing point:

No data available
Boiling point or initial boiling point and

No data available

boiling range:

Flammability: not applicable not determined Lower explosion limits: Upper explosion limits: not determined Flash point: No data available Auto-ignition temperature: No data available Decomposition temperature: not determined pH-Value: No data available Viscosity / kinematic: No data available No data available Water solubility:

Solubility in other solvents

not determined

Dissolution rate:

Partition coefficient n-octanol/water:

Dispersion stability:

Vapour pressure:

Vapour pressure:

No data available

Vapour pressure:

No data available

1,0872 g/cm³



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 7 of 12

Relative density:

Bulk density:

Relative vapour density:

Particle characteristics:

No data available

No data available

No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Sustaining combustion: No data available

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

Solvent separation test:

No data available
Solvent content:

No data available
Solid content:

not determined
Sublimation point:

No data available
Softening point:

No data available
Pour point:

No data available

No data available:

Viscosity / dynamic: No data available Flow time: No data available

Further Information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated: SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

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

Toxicocinetics, metabolism and distribution

No data available



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 8 of 12

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 378,6 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name	Chemical name					
	Exposure route	Dose		Species	Source	Method	
107-21-1	ethanediol						
	oral	LD50 mg/kg	7712	Rat	Study report (1968)	according to BASF-internal standards	
	dermal	LD50 mg/kg	> 3500	Mouse	Fundamental and Applied Toxicology 27 1	LD50 derived from developmental toxicity	
108-91-8	cyclohexylamine						
	oral	ATE mg/kg	100				
	dermal	ATE mg/kg	300				

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging fertility. (cyclohexylamine)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (ethanediol)

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No data available



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 9 of 12

Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name								
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method		
107-21-1	ethanediol								
	Acute fish toxicity	LC50 mg/l	> 72860	96 h	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	EPA 600/4-90/027. U.S. Environmental Pro		
	Acute algae toxicity	ErC50 13000 mg/l	6500 -	96 h	Pseudokirchneriella subcapitata	Study report (1982)	other: EPA 600/9-78-018, 1978		
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (1998)	OECD Guideline 202		
	Fish toxicity	NOEC mg/l	15380	7 d	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	other: EPA 600/4-89/001. U.S. Environmen		
	Algae toxicity	NOEC mg/l	> 100	8 d	Scenedesmus quadricauda	REACh Registration Dossier	OECD Guideline 201		
	Crustacea toxicity	NOEC 15000 mg/l	7500 -	21 d	Daphnia magna	REACh Registration Dossier	other: ASTM		

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol	-1,36

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available

Further information

Avoid release to the environment.

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 10 of 12

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (cyclohexylamine)

14.3. Transport hazard class(es): 14.4. Packing group: Ш Hazard label: Ω Classification code: C9 Special Provisions: 274 Limited quantity: 5 L Excepted quantity: E1 Transport category: Hazard No: 80 Tunnel restriction code: Ε

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (cyclohexylamine)

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Classification code:C9Special Provisions:274Limited quantity:5 LExcepted quantity:E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (cyclohexylamine)

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Special Provisions:223, 274Limited quantity:5 LExcepted quantity:E1EmS:F-A. S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1760

14.2. UN proper shipping name: CORROSIVE LIQUID, N.O.S. (cyclohexylamine)

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Special Provisions:A3 A803Limited quantity Passenger:1 L



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 11 of 12

Passenger LQ: Y841 Excepted quantity: E1

IATA-packing instructions - Passenger:852IATA-max. quantity - Passenger:5 LIATA-packing instructions - Cargo:856IATA-max. quantity - Cargo:60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Information according to 2012/18/EU

(SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9,11,12.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service LC50: Lethal concentration, 50%

LD50: Lethal dose, 50% Flam. Liq: Flammable liquid Acute Tox: Acute toxicity Skin Corr: Skin corrosion Eye Dam: Eye damage Repr: Reproductive toxicity

STOT RE: Specific target organ toxicity - repeated exposure



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cyclohexylamine solution 1 mol/l - 1 M solution in ethylene glykol

Revision date: 17.07.2023 Product code: 16631 Page 12 of 12

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Repr. 2; H361f	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H361f	Suspected of damaging fertility.
11070	Manager dans a fallida con the contract and a consequent and some site of the contract and

H373 May cause damage to kidneys through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)