Safety data sheet

according to 1907/2006/EC, Article 31 Commission regulation (EU) 2020/878

Printing date 20.03.2023 *Version number 10.0 (replaces version 9.0)* *Revision: 20.03.2023*

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

· ***1.1 Product identifier***

· ***Trade name:*** Cyclohexane, Multisolvent® HPLC grade ACS ISO UV-VIS

· ***Article number:*** CI0039
· ***CAS Number:***
110-82-7
· ***EC number:***
203-806-2
· ***Index number:***
601-017-00-1
· ***1.2 Relevant identified uses of the substance or mixture and uses advised against***
No further relevant information available.
· ***Application of the substance / the preparation:*** Laboratory reagent

· ***1.3 Details of the supplier of the safety data sheet***
· ***Manufacturer/Supplier:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com
· ***Regional representation:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com

· ***Further information obtainable from:*** technical department
· ***1.4 Emergency telephone number:***
Please contact the regional Scharlab distributor/dealer in your country
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

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


flame

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


health hazard

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


environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

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Skin Irrit. 2	H315 Causes skin irritation.
STOT SE 3	H336 May cause drowsiness or dizziness.

· ***2.2 Label elements***
· ***Labelling according to Regulation (EC) No 1272/2008***
The substance is classified and labelled according to the GB CLP regulation.
· ***Hazard pictograms***

GHS02 GHS07 GHS08 GHS09

· ***Signal word*** Danger
· ***Hazard statements***
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
H410 Very 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.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P370+P378	In case of fire: Use CO2, powder or water spray to extinguish.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.

SECTION 3: Composition/information on ingredients

· ***3.1 Substances***
· ***CAS No. Description***
110-82-7 cyclohexane
· ***Identification number(s)***
· ***EC number:*** 203-806-2
· ***Index number:*** 601-017-00-1

SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***After inhalation:***
Take affected persons into fresh air and keep quiet.

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In case of unconsciousness place patient stably in side position for transportation.
In severe cases such as cardiorespiratory arrest, artificial respiration techniques such as mouth-to-mouth resuscitation, cardiac massage, oxygen supply, etc. will be applied.
Seek immediate medical advice.

· ***After skin contact:***
Immediately wash with water and soap and rinse thoroughly.
Immediately remove contaminated clothing.
Wash contaminated clothing before reuse.
After contact with the molten product, cool rapidly with cold water.

· ***After eye contact:***
Rinse opened eye for several minutes under running water.
In the event that the injured person wears contact lenses, they must be removed as long as they are not stuck to the eyes, otherwise additional damage could occur.
Seek medical treatment.

· ***After swallowing:*** If symptoms persist consult doctor.

· ***4.2 Most important symptoms and effects, both acute and delayed***
The main symptoms are described for different cases of contact: Skin, eyes, inhalation and ingestion.

· ***4.3 Indication of any immediate medical attention and special treatment needed***
Treat symptomatically.

SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***

· ***Suitable extinguishing agents:***
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· ***For safety reasons unsuitable extinguishing agents:*** Water with full jet

· ***5.2 Special hazards arising from the substance or mixture***
Under certain fire conditions, traces of other toxic gases cannot be excluded.
Not combustible.
Vapours may form explosive mixtures with air.

· ***5.3 Advice for firefighters***

· ***Protective equipment:***
Cool exposed containers with water spray or mist.
In the work of extinction it is necessary to provide respiratory protection and full chemical protective clothing.

· ***Additional information***
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation
Keep away from ignition sources.
Eliminate all sources of ignition.
Particular danger of slipping on leaked/spilled product.
Wear protective equipment. Keep unprotected persons away.

· ***6.2 Environmental precautions:***
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

· ***6.3 Methods and material for containment and cleaning up:***
Send for recovery or disposal in suitable receptacles.

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Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling***
Earthing/equipotential bonding of the container and receiving equipment.
Only use tools that do not produce sparks.
Take precautionary measures against electrostatic discharge.
Store in cool, dry place in tightly closed receptacles.
Avoid breathing mist/vapours/spray.
Do not eat, drink or smoke during use.
Wash hands after any manipulation.

· ***Information about fire - and explosion protection:***
Fumes can combine with air to form an explosive mixture.
Emergency cooling must be available in case of nearby fire.
Handle only outside or in explosion protected rooms.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:***
Store in a cool, dry, well-ventilated place.
Store only in unopened original receptacles.
Use only receptacles specifically permitted for this substance/product.
Store in a cool location.
· ***Information about storage in one common storage facility:*** Not required.
· ***Further information about storage conditions:***
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
See product's label for recommended storage temperature.
· ***7.3 Specific end use(s)*** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

110-82-7 cyclohexane

WEL Short-term value: 1050 mg/m³, 300 ppm
Long-term value: 350 mg/m³, 100 ppm

· ***Additional information:*** The lists valid during the making were used as basis.

· ***8.2 Exposure controls***
· ***Appropriate engineering controls*** No further data; see item 7.
· ***Individual protection measures, such as personal protective equipment***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

· ***Respiratory protection:*** Not required.
· ***Hand protection***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· ***Penetration time of glove material***
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· ***Eye/face protection***

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***
· ***General Information***

· ***Physical state***	Fluid
· ***Colour:***	Colourless
· ***Odour:***	Sweetish
· ***Odour threshold:***	Not determined.
· ***Melting point/freezing point:***	6.5 °C
· ***Boiling point or initial boiling point and boiling range***	81 °C
· ***Flammability***	Highly flammable.
· ***Lower and upper explosion limit***	
· ***Lower:***	1.3 Vol %
· ***Upper:***	8.4 Vol %
· ***Flash point:***	-18 °C
· ***Ignition temperature:***	260 °C
· ***Decomposition temperature:***	Not determined.
· ***pH***	Not determined.
· ***Viscosity:***	
· ***Kinematic viscosity***	Not determined.
· ***Dynamic at 20 °C:***	0.94 mPas
· ***Solubility***	
· ***water at 20 °C:***	0.05 g/l
· ***Partition coefficient n-octanol/water (log value)***	0.53656

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· ***Vapour pressure at 20 °C:***	104 hPa
· ***Density and/or relative density***	
· ***Density at 20 °C:***	0.77 g/cm³
· ***Relative density***	Not determined.
· ***Vapour density***	Not determined.
· ***9.2 Other information***	
· ***Appearance:***	
· ***Form:***	Fluid
· ***Important information on protection of health and environment, and on safety.***	
· ***Auto-ignition temperature:***	Not determined.
· ***Explosive properties:***	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· ***Molecular weight***	84.18 g/mol
· ***Change in condition***	
· ***Evaporation rate***	Not determined.
· ***Information with regard to physical hazard classes***	
· ***Explosives***	Void
· ***Flammable gases***	Void
· ***Aerosols***	Void
· ***Oxidising gases***	Void
· ***Gases under pressure***	Void
· ***Flammable liquids***	Highly flammable liquid and vapour.
· ***Flammable solids***	Void
· ***Self-reactive substances and mixtures***	Void
· ***Pyrophoric liquids***	Void
· ***Pyrophoric solids***	Void
· ***Self-heating substances and mixtures***	Void
· ***Substances and mixtures, which emit flammable gases in contact with water***	Void
· ***Oxidising liquids***	Void
· ***Oxidising solids***	Void
· ***Organic peroxides***	Void
· ***Corrosive to metals***	Void
· ***Desensitised explosives***	Void

SECTION 10: Stability and reactivity

· ***10.1 Reactivity***
Vapours may produce an explosive mixture with the air.
Highly flammable liquid and vapor.
· ***10.2 Chemical stability***
· ***Thermal decomposition / conditions to be avoided:***
To avoid thermal decomposition do not overheat.
Avoid: Heat, flame, sparks.
· ***10.3 Possibility of hazardous reactions***
Forms explosive gas mixture with air.
Toxic fumes may be released if heated above the decomposition point.
Danger of receptacles bursting because of high vapour pressure when heated.
Danger of polymerisation.
· ***10.4 Conditions to avoid*** Heat, open flames and sparks

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· ***10.5 Incompatible materials:***
Combustibles
Reducing material
· ***10.6 Hazardous decomposition products:*** No dangerous decomposition products known.

SECTION 11: Toxicological information

· ***11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008***
· ***Acute toxicity***
· ***LD/LC50 values relevant for classification:***

Oral	LD50	12,705 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	19.74 mg/l (rat)

· ***Skin corrosion/irritation*** Causes skin irritation.
· ***STOT-single exposure*** May cause drowsiness or dizziness.
· ***Aspiration hazard*** May be fatal if swallowed and enters airways.
· ***11.2 Information on other hazards***
· ***Endocrine disrupting properties*** Substance is not listed.

SECTION 12: Ecological information

· ***12.1 Toxicity***
· ***Aquatic toxicity:***
Toxicity to fish
LC50 - Pimephales promelas (Fathead piscardo) - 4.53 mg/L - 24 h
Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (large sea flea) - 0.9 mg/L - 24 h
Toxicity to algae
CE50 - Pseudokirchneriella subcapitata (Green algae) - 3.4 mg/L (24h)
· ***12.2 Persistence and degradability*** No further relevant information available.
· ***12.3 Bioaccumulative potential*** log Pow: 3.44 (20ºC)
· ***12.4 Mobility in soil*** Koc: 770
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.
· ***12.6 Endocrine disrupting properties***
The product does not contain substances with endocrine disrupting properties.
· ***12.7 Other adverse effects***
· ***Remark:*** Very toxic for fish
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

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SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· ***Uncleaned packaging:***
· ***Recommendation:*** Disposal must be made according to official regulations.

SECTION 14: Transport information

· ***14.1 UN number or ID number***
· ***ADR, IMDG, IATA*** UN1145
· ***14.2 UN proper shipping name***
· ***ADR*** 1145 CYCLOHEXANE, ENVIRONMENTALLY HAZARDOUS
· ***IMDG*** CYCLOHEXANE, MARINE POLLUTANT
· ***IATA*** CYCLOHEXANE
· ***14.3 Transport hazard class(es)***

· ***ADR, IMDG***

· ***Class*** 3 Flammable liquids.
· ***Label*** 3

· ***IATA***

· ***Class*** 3 Flammable liquids.
· ***Label*** 3
· ***14.4 Packing group***
· ***ADR, IMDG, IATA*** II
· ***14.5 Environmental hazards:*** Environmentally hazardous substance, liquid; Marine Pollutant
· ***Marine pollutant:*** Yes
Symbol (fish and tree)
· ***Special marking (ADR):*** Symbol (fish and tree)
· ***14.6 Special precautions for user*** Warning: Flammable liquids.
· ***Hazard identification number (Kemler code):*** 33
· ***EMS Number:*** F-E,S-D
· ***Stowage Category*** E
· ***14.7 Maritime transport in bulk according to IMO instruments*** Not applicable.
· ***Transport/Additional information:***

· ***ADR***
· ***Limited quantities (LQ)*** 1L
· ***Transport category*** 2

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· ***Tunnel restriction code*** D/E
· ***UN "Model Regulation":*** UN 1145 CYCLOHEXANE, 3, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

· ***Directive 2012/18/EU***
· ***Named dangerous substances - ANNEX I*** -
· ***Seveso category***
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
· ***Qualifying quantity (tonnes) for the application of lower-tier requirements*** 100 t
· ***Qualifying quantity (tonnes) for the application of upper-tier requirements*** 200 t
· ***15.2 Chemical safety assessment:*** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

· ***Department issuing SDS:*** product safety department
· ***Contact:*** msds@scharlab.com
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1