Safety Data Sheet
According to Regulation (EC) 1907/2006

1250 **Cyclohexane**

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Name:
Cyclohexane

Synonym:
Hexahydrobenzene, Hexamethylene, Hexanaphtene

CAS: [110-82-7]

REACH Registration Number: 01-2119463273-41-XXXX

1.2 Relevant identified uses of the substance or mixture:

Manufacture
Distribution of Substance.
Formulation
Use as laboratory chemicals.

1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.
C/Garraf 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallès
(Barcelona) Spain
Tel. (+34) 937 489 400
e-mail: product.safety@panreac.com

1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)
Tel.: (+34) 937 489 499

2. Identification of dangers

2.1 Classification of the substance or the mixture.

Classification Regulation (CE) nº 1272/2008.

Flam. Liq. 2
Skin Irrit. 2
Asp. Tox. 1
STOT SE 3
Aquatic Acute 1
Aquatic Chronic 1

Classification (67/548/CEE or 1999/45/CE).

F	Highly flammable	R11
Xn	Harmful	R38
N	Dangerous for the environment	R65
		R67
		R50/53

2.2 Label elements:

Hazard Pictograms

Signal word
Danger

Hazard statements
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves, protective clothing, eye protection or face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

For the full text of the R-phrases mentioned in this section, see section 16.
2.3 Other hazards:

No further relevant information available.

3. Composition/information on ingredients

Name: Cyclohexane
Formula: C6H12 M.= 84,16 CAS [110-82-7]
EC number (EINECS): 203-806-2
EC index number: 601-017-00-1
REACH Registration Number: 01-2119463273-41-XXXX

4. First aid measures

4.1 General indications:
Never provide drink or induce vomiting in the event of loss of consciousness.

4.2 Inhaling:
Take the person out into the fresh air. In the event of suffocation, proceed immediately to provide artificial respiration. Seek immediate medical assistance.

4.3 Contact with the skin:
Wash with plenty of soap and water. Remove contaminated clothing.

4.4 Eyes:
Wash with plenty of water (for at least 15 minutes), keeping eyelids open. Seek medical assistance.

4.5 Swallowing:
Seek immediate medical assistance. Wash mouth out immediately. Precaution in the event of vomiting (there is a risk of aspiration). Keep respiratory tracts clear.
· **Most important symptoms and effects, both acute and delayed:**
See Section 11 for more information.
· **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5. Firefighting measures

5.1 Suitable extinguishing media:
Carbon dioxide (CO2). Alcohol resistant foam. Dry powder.

5.2 Unsuitable extinguishing media:
Running water.

5.3 Special hazards arising from the substance or mixture:
Combustible. Keep away from sources of ignition. The fumes are heavier than air, so they may spread at floor level. Auf Rückzündung achten In the event of fire, toxic fumes may form: CO y CO2. Precipitate fumes formed with water.

5.4 Advice for firefighters:
Use complete protective equipment. Self-contained breathing equipment. Cool the recipients with water.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Do not inhale the fumes. Use personal protective equipment as required. Avoid sources of ignition. Do not smoke. Avoid contact with the skin, eyes or clothing. Ensure adequate ventilation.

6.2 Environmental precautions:
Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

6.3 Methods and material for containment and cleaning up:
Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

7. Handling and storage

7.1 Precautions for safe handling:
Avoid the formation of electrostatic charges. Ensure good ventilation and renewal of the air in the premises. Avoid breathing dust, fume, gas, mist, vapours or spray. Avoid contact with the skin, eyes or clothing. Use personal protective equipment as required.

7.2 Conditions for safe storage, including any incompatibilities:
Away from sources of ignition and heat. Do not store in plastic containers.
Recommended storage temperature: Room temperature.
· Storage class: 3
Technical instructions (air): Highly flammable.
7.3 Specific end use(s):
No further relevant information available.

8. Exposure controls/personal protection

8.1 Exposure controls:
Ensure good ventilation and renewal of the air in the premises.

8.2 Control parameters:

8.3 Respiratory protection:
In the event of fumes forming/aerosols, use suitable respiratory protection. Filter A.

8.4 Hand protection:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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.
· **For the permanent contact gloves made of the following materials are suitable:**
Material: Nitrile rubber, NBR. Recommended thickness of the material: >= 0,4 mm Breakthrough time: >= 480 min.
· **As protection from splashes gloves made of the following materials are suitable:**
Material: Nitrile rubber, NBR. Recommended thickness of the material: >= 0,11 mm Breakthrough time: >= 30 min

8.5 Eye/face protection:
Use safety glasses.

8.6 Individual hygiene measures:
Remove contaminated clothing. Use suitable work clothing. Wash hands and face before breaks and when the job is done.

8.7 Environmental exposure controls:
Avoid pollution of the soil, water supplies and drains.

9. Physical and chemical properties

Appearance: liquid
Colour: Colourless
Granulometry: N/A
Odour: Characteristic.
pH:
N/A
Melting point/freezing point: 6,47 °C
Initial boiling point and boiling range: 80,7 °C
Flash point: - 18 °C
Flammability (solid, gas):
N/A
Upper/lower flammability or explosive limits: 8,3 %(V) / 1,2 %(V)
Vapour pressure: 104 hPa (20 °C)
Vapour density: N/A
Relative density:

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(20/4) 0,7781 g/ml
Solubility: 0,05 g/l (20 °C)
Partition coefficient: n-octanol/water:
N/A
Auto-ignition temperature: 260 °C
Decomposition temperature: N/A

Kinematic viscosity: N/A
Dynamic viscosity: 0,94 mPa.s (20 °C)

10. Stability and reactivity

10.1 Conditions to avoid:
High temperatures. Direct sunlight. Humidity.

10.2 Incompatible materials:
Strong oxidant agents.

10.3 Hazardous decomposition products:
Carbon monoxide.

10.4 Chemical stability:
The product is chemically stable under standar ambient conditions (room temperature).

11. Toxicological information

11.1 Acute toxicity:
LD50 oral rat : 12.705 mg/kg
LD50 skn rbt : > 2.000 mg/kg
LC50 inh rat : 32880 mg/m3 4h

11.2 Dangerous effects for health:
If fumes inhaled: Irritations to the skin, eyes, mucosae and respiratory tracts. kidney problems, hepatic problems, effects on the central nervous system, headaches, vertigo, tiredness, drowsiness In high concentrations: loss of consciousness, breathing difficulties, death Through contact with the eyes: irritations, blindness (irreversible injury of the optic nerve) Upon contact with the skin: irritations Can de-moisturize and dehydrate it, producing irritation and dermatitis. If swallowed: Irritations of the mucosae in the mouth, throat, oesophagus and intestinal tract., stomach pains, drowsiness, nausea, vomiting, diarrhoea Risk of aspiration upon vomiting. **Carcinogenicity:** No evidence. **Germ cell mutagenicity:** No evidence. **Reproductive toxicity:** Conclusions are lacking regarding evaluation of a damaging effect on the foetus., Not classified as toxic for reproduction.

12. Environmental information

12.1 Toxicity:
Acute toxicity for fish:
LC50 4,5 mg/l (96h) (OECD 203)
Acute toxicity for aquatic invertebrates:
EC50 (Daphnia magna) 0,90 mg/l (48h) (OECD 202)
Acute toxicity for Algae:
EC50 3,4 mg/l (72h) (OECD 201)

12.2 Persistence and Degradability :
COD 3421 mg/g
Biodegradability > 70% (28d)
Easily biodegradable product.

12.3 Bioaccumulative potential:
log Pow = 3,44
BCF 167 (OECD 305)
Possibly bioaccumulable product.

12.4 Mobility in soil :
Data not available.

12.5 Assessment PBT and MPMB :
According to Annex XIII of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): Does not meet the criteria for PBT (persistent / bioaccumulative / toxic).
According to Annex XIII of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): Does not meet the criteria vPvB (very persistent / very bioaccumulative).

12.6 Other adverse effects:
Dangerous for drinking water.
Do not allow it to enter soils or water channels.

12.7 General notes:

· **Water hazard class:**

(German Regulation) (Assessment by list):
2 hazardous for water.

(Dutch Regulation):
4 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal considerations

13.1 Waste treatment methods:
In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.
In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.
2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes.Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.
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13.2 Contaminated containers:
Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.
European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.
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14. Transport information

Overland (ADR):
Technical name: CYCLOHEXANE
UN 1145 Class: 3 PELIG.M.AMB Packaging group: II (D/E)
By sea (IMDG):
Technical name: CYCLOHEXANE
UN 1145 Class: 3 PELIG.M.AMB Packaging group: II

By air (ICAI-IATA):
Technical name: Cyclohexane
UN 1145 Class: 3 PELIG.M.AMB Packaging group: II
Packaging instructions: CAO 364 PAX 353

15. Regulatory information

Categorized as hydrocarbon substance.
For this product a chemical safety assessment was not carried out.

16. Other information

Other precautionary statements
P332+P313 If skin irritation occurs: Get medical advice/attention.
P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

Labelling (65/548/CEE or 1999/45/CE)

R-phrase(s):
R11 Highly flammable.
R38 Irritating to skin.
R65 Harmful: may cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s):
S9 Keep container in a well-ventilated place.
S16 Keep away from sources of ignition - No smoking.
S25 Avoid contact with eyes.
S33 Take precautionary measures against static discharges.
S51 Use only in well-ventilated areas.
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Version and revision date : 6 07.10.2013
Remplaced: 26.04.2013
In respect of the previous review, changes have been made to the following sections: 1,2,4,5,6,7,8,10,11,12,15
The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.