

S a f e t y D a t a S h e e t

According to Regulation (EC) 1907/2006



1192 **Benzene**

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

1.1 Product identifier

Name:

Benzene

Synonym:

Benzol, Cyclohexatriene

REACH Registration Number: 01-2119447106-44-XXXX

1.2 Relevant identified uses of the substance or mixture:

For laboratory utilisation, analysis, research and fine chemistry.

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

Classification of the substance or the mixture.

Classification Regulation (CE) nº 1272/2008.

Carc. 1A

Muta. 1B

Flam. Liq. 2

Eye Irrit. 2

Skin Irrit. 2

STOT RE 1

Asp. Tox. 1

Hazard Pictograms



Signal word

Danger

Hazard statements

H350 May cause cancer.
H340 May cause genetic defects.
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H372 Causes damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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

T Toxic	R36/38
F Highly flammable	R11
	R46
	R45
	RE48/23/24/25
	R65

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

3. Composition/information on ingredients

Name: Benzene

Formula: C₆H₆ M.= 78,11 CAS [71-43-2]

EC number (EINECS): 200-753-7

EC index number: 601-020-00-8

REACH Registration Number: 01-2119447106-44-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 to provide artificial respiration.

4.3 Contact with the skin:

Wash with plenty of 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:

Avoid vomiting. Risk of aspiration. Seek medical assistance. Laxatives: sodium sulphate (1 soup-spoonful in 250 ml of water). Administer Vaseline oil as a laxative (3 ml/kg). Stomach lavage. (Only if unavoidable, and with extreme care).

5. Firefighting measures

5.1 Suitable extinguishing media:

Foam. Dry powder.

5.2 Unsuitable extinguishing media:

No specific data.

5.3 Special hazards arising from the substance or mixture:

Flammable. Keep away from sources of ignition. The fumes are heavier than air, so they may spread at floor level. May form explosive mixtures with the air. In the event of fire, toxic fumes may form.

5.4 Advice for firefighters:

Suitable clothing and footwear.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Do not inhale the fumes.

6.2 Environmental precautions:

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. No special indications.

7.2 Conditions for safe storage, including any incompatibilities:

Well sealed containers. In well ventilated premises. Away from light. Away from sources of ignition and heat. Room temperature. Do not store in plastic containers.

8. Exposure controls/personal protection

8.1 Exposure controls:

Ensure good ventilation and renewal of the air in the premises.

8.2 Control parameters:

VLA-ED: 9,7 mg/m³ ,

8.3 Respiratory protection:

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

8.4 Hand protection:

Use suitable gloves nitrile

8.5 Eye/face protection:

Use suitable goggles.

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:

Fulfill the commitments under local environmental protection legislation.

9. Physical and chemical properties

Appearance: liquid

Colour: Colourless

Granulometry: N/A

Odour: Characteristic.

pH:

N/A

Melting point/freezing point: 5,5 °C

Initial boiling point and boiling range: 80,1 °C

Flash point: - 11 °C

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits: 8 %(V) / 1,4 %(V)

Vapour pressure: 101 hPa (20 °C)

Vapour density: N/A

Relative density: (20/4) 0,878

Solubility: 0,7 g/l in water (20 °C)

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature: 555 °C

Decomposition temperature: N/A

Kinematic viscosity:N/A

Dynamic viscosity:0,66 mPa.s(25 °C)

10. Stability and reactivity

10.1 Conditions to avoid:

High temperatures.

10.2 Incompatible materials:

Mineral acids. Oxidant agents. Sulphur. Halogens. Halogen halides. Halogenated hydrocarbons. Light metals

10.3 Hazardous decomposition products:

No specific data.

10.4 Chemical stability:

The gases/fumes can form explosive mixtures with the air.

11. Toxicological information

11.1 Acute toxicity:

LD L0 oral man : 50 mg/kg

LD50 oral rat : 930 mg/kg

TC L0 inh man : 100 ppm

LC50 inh rat : 10000 ppm 7h

11.2 Dangerous effects for health:

The suspicion of possible effects altering the hereditary patrimony of humans requires further clarification. If fumes inhaled: Irritations to the respiratory tracts. Due to absorption: effects on the central nervous system headaches vertigo arrhythmia spasms hypotension breathing difficulties anxiety narcosis respiratory paralysis cardiovascular failure death If swallowed: nausea vomiting Risk of aspiration upon vomiting. Upon contact with the skin: irritations Risk of cutaneous absorption. Can have a demoisturizing effect on the skin, with the risk of secondary infection. Through contact with the eyes: Irritations to the mucosae

12. Environmental information

12.1 Toxicity:

- EC50 test (mg/l):

Bacteria (Photobacterium phosphoreum) 64 mg/l

Classification:

Extr. toxic

Fish (C. auratus) 46 mg/l

Classification:

Extr. toxic

Bacteria (Ps. putida) EC0 92 mg/l

Classification: Extr. toxic

- Receptor medium:

Risk for the water environment

High

Risk for the land environment

High

- Observations:

Extremely toxic in water environments.

12.2 Persistence and Degradability :

- Test:

COD = D 19 D % ThOD

ThOD 3,10 g/g

BOD = D 10 D % ThOD/5d

- Biotic degradation classification:

BOD5/COD

Biodegradability

Medium, between 1/3 and 1/10

- Abiotic degradation depending on pH:

- Observations:

Medium-term biodegradable product.

12.3 Bioaccumulative potential:

- Test:

- Bioaccumulation:

Risk

- Observations:

Bioaccumulable product in fish proteins.

12.4 Mobility in soil :

Repartition: log P(oct)= 2.13

12.5 Assessment PBT and MPMB :

Data not available.

12.6 Other adverse effects:

Risk of formation of explosive fumes on the surface of the water.

Carcinogenic product.

Do not allow it to enter soils or water channels.

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: BENZENE

UN 1114 Class: 3 Packaging group: II (D/E)

By sea (IMDG):

Technical name: BENZENE

UN 1114 Class: 3 Packaging group: II

By air (ICAI-IATA):

Technical name: Benzene

UN 1114 Class: 3 Packaging group: II

Packaging instructions: CAO 364 PAX 353

15. Regulatory information

The substance is subject to Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals.

Categorized as hydrocarbon substance.

16. Other information

Other precautionary statements

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

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

P264 Wash...thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves, protective clothing, eye protection or face protection.

P281 Use personal protective equipment as required.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

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

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P331 Do NOT induce vomiting.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P370+P378 In case of fire: Use for extinction.

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

P405 Store locked up.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

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

R-phrases(s): **R36/38** Irritating to eyes and skin.
 R11 Highly flammable.
 R46 May cause heritable genetic damage.
 R45 May cause cancer.
 RE48/23/24/25 Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
 R65 Harmful: may cause lung damage if swallowed.

S-phrase(s): **S45** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S53 Avoid exposure - obtain special instructions before use.

Version and revision date : 5 10.04.2013

Date published: 10.04.2013

In respect of the previous review, changes have been made to the following sections: 2

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.