



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Version 2.0
Revision date: 06.12.2010

Reservoir C14H10

Material: 346561-8071-000
Print Date 27.03.2012

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

Trade name : Gas reservoir, contains: phenanthrene
Manufacturer/supplier : Carl Zeiss NTS GmbH
Address : Carl-Zeiss-Straße 22
D-73447 Oberkochen
Telephone : +49 7364 20-0
Technical Information : Chemical and material engineering
Telephone : +49 7364 20-4599
Telefax : +49 7364 20-4521
Product Safety : Chemical and material engineering
Mailto : zeih@zeiss.de, hamm@zeiss.de
Emergency telephone : Poisoning Control Center
Telephone : +49 551 19240 (24 hours)

Use of the Substance / Preparation

Sector : Laboratory areas in industry and business, Research and Development
Application category : Industrial use, Professional use
Use : Gas reservoir for vacuum applications

2. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 (GHS) ¹

Acute toxicity, Category 4; Route of Exposure: Oral
H302: Harmful if swallowed.

Acute aquatic toxicity, Category 1
H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 1
H410: Very toxic to aquatic life with long lasting effects.

Classification procedure: Statement of the manufacturer/supplier

Classification according to Directive 67/548/EEC or Directive 1999/45/EC ²

Xn: Harmful
R22: Harmful if swallowed.

N: Dangerous for the environment
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

For footnotes, see section 16.



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3. Composition / information on ingredients

Information on the substance / preparation (mixture)

Phenanthrene

EC-No. : 201-581-5
CAS-No. : 85-01-8

4. First aid measures

General advice : Remove and wash contaminated clothing before re-use.
Inhalation : Provide with fresh air.
Skin contact : Wash off with plenty of water. If skin irritation persists, call a physician.
Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion : Immediately give large quantities of water to drink. Call a physician.

5. Fire-fighting measures

Suitable extinguishing media : Water, Carbon dioxide (CO₂), Foam, Dry powder
Hazards caused by the substance/combustion products/origin of gases : Combustible. Vapors are heavier than air. Vapours may form explosive mixture with air. In case of fire formation of hazardous vapors possible. In the event of fire and/or explosion do not breathe fumes.
Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Other data : Avoid extinguishing water reaching water, ground water or sewage system.

6. Accidental release measures

Personal precautions : Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Ensure adequate ventilation.
Environmental precautions : Do not flush into surface water or sanitary sewer system.
Removal : Take up mechanically and dispose of according to the local legal regulations. Clean contaminated surface thoroughly.

7. Handling and storage

Handling

Safe handling advice : Avoid contact with skin, eyes and clothing.
Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage



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Requirements for storage areas and containers : Keep tightly closed. Keep in a dry place.

Storage stability

Storage temperature : 15 - 25 °C

8. Exposure controls / personal protection

Exposure limit(s)

Remarks : None.

Occupational exposure controls

Protective measures : Preventive skin protection Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Hygiene measures : Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday.

Respiratory protection : Required if dust is formed. Half mask with a particle filter P2 (EN 143).

Hand protection : Use protective gloves which have been adapted to the respective purpose and are appropriately resistant to chemicals (DIN EN 374).
: Glove material: Nitrile rubber
: Layer thickness: 0,11 mm
: Break through time: > 480 min

Eye protection : Safety glasses

Skin and body protection : closed work clothing

Environmental exposure controls

Additional advice : see section 6

9. Physical and chemical properties

General Information

Form : crystalline
Colour : white

Important Health Safety and Environmental Information

Boiling point/boiling range : 336 °C at 1.013 hPa
Melting point/range : 97 - 100 °C
Flash point : 171 °C (open cup)
Ignition temperature : > 450 °C
Vapour pressure : 0,00012 hPa at 20 °C



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Density : 690 kg/m³
Bulk density
Water solubility : 1,15 g/l at 25 °C
Partition coefficient: : 4,46 (experimental)
n-octanol/water

10. Stability and reactivity

Hazardous reactions : Violent reactions are possible with oxidizing agents.
Conditions to avoid : Strong heating.
Materials to avoid : Oxidizing agents
Hazardous decomposition products : In case of fire formation of carbonoxides and other toxic gases/vapors is possible.
Additional advice : Sublimable. The following applies in general to flammable organic substances and preparations: in correspondingly fine distribution, when whirled up, a dust explosion potential may generally be assumed.

11. Toxicological information

Toxicology tests

Acute oral toxicity : LD50 rat: 1.800 mg/kg (RTECS)
Skin irritation : Mild skin irritation
Mutagenic effect : Bacterial mutagenicity: Escherichia coli: negative (Lit.)

Practical experience

Human experience : Risk of photosensitization.
Ingestion : Absorption. We have no description of any toxic symptoms.

General Information

Other information on toxicity : Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Ecotoxicity

Fish-toxicity : LC50 Oncorhynchus mykiss: 3,2 mg/l / 96 h (ECOTOX Database)
Daphnia toxicity : EC50 Daphnia pulex: 0,35 mg/l / 48 h (ECOTOX Database)

Bioaccumulative potential



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General Information : An appreciable bioaccumulation potential is to be expected (log Po/w >3).

Other environmental data

Other data : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not discharge into sewerage system, surface water or soil.

13. Disposal considerations

Product : In accordance with local and national regulations, if applicable send back the empty reservoir for refilling.

14. Transport information

Land transport ADR/RID

Class : 9 UN No. : 3077 Packaging group : III
Classification code : M7
Labels : 9
Description of the goods : Environmentally hazardous substance, solid, n.o.s. (Phenanthrene)

Sea transport IMDG

Class : 9 UN No. : 3077 Packaging group : III
EmS : F-A, S-F

Marine pollutant :

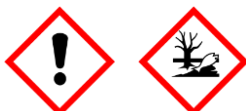
Labels : 9
Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PHENANTHRENE)

Air transport ICAO/IATA

Class : 9 UN No. : 3077 Packaging group : III
Labels : 9
Description of the goods : Environmentally hazardous substance, solid, n.o.s. (Phenanthrene)

15. Regulatory information

Labelling according to Regulation (EC) No. 1272/2008 (GHS) ¹





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Signal word: Warning

Hazard statements

- H302 : Harmful if swallowed.
- H400 : Very toxic to aquatic life.
- H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P262 : Do not get in eyes, on skin, or on clothing.
- P272 : Contaminated work clothing should not be allowed out of the workplace.
- P273 : Avoid release to the environment.

Other data

CAS-No.: 85-01-8
For footnotes, see section 16.

Labelling according to Directive 67/548/EEC or Directive 1999/45/EC ²

Letter(s) for the symbol(s) and indications of danger



Xn : Harmful



N : Dangerous for the environment

R-phrases(s)

- R22 : Harmful if swallowed.
- R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

- S24/25 : Avoid contact with skin and eyes.
- S61 : Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Other data

EC-No.: 201-581-5

For footnotes, see section 16.

EU-Regulations

- Seveso Directive II : 96/82/EG: Falls under Seveso II - Directive / Major accident legislation Number: 9a



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Amount 1: 100.000 kg
Amount 2: 200.000 kg

Restrictions : 94/33/EG:
Follow Directive 94/33/EC on the protection of young people at work and its national implementations.
: 92/85/EWG:
Follow Directive 92/85/EC on the protection of pregnant workers and workers who have recently given birth or are breastfeeding, and its national implementations.

16. Other information

The information in this safety sheet is based on the data available at the time of compilation and is intended to describe the product with respect to the precautions to be taken in its use. This information is provided without any guarantee of the properties specified.

Update information

Relevant changes to the previous version are symbolized by vertical bars at the left edge.

Additions : Classification and Labelling according to GHS (Regulation 1272/2008)

Additional advice

Sources: Directive 67/548/EEC Annex I, TRGS 900, TRGS 903, International dangerous goods regulations, Supplier details

Footnotes:

1] Obligatory for substances from December, 01, 2010, obligatory for mixtures from June, 01, 2015.

2] Valid for substances until November, 30, 2010, valid for preparations (mixtures) until May, 31, 2015.