

Safety Data Sheet according to (EC) No. 1907/2006

Day of issue: 15 November 1995

Day of revision: 11 November 2008

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

Trade names

OPD Tablets 2 mg, cat. no. 4090

Use

For research and analysis (ELISA).

Manufacturer/Supplier

See below.

Telephone/Telefax

See below.

Emergency telephone

+45 39 27 17 71

Responsible person for the safety data sheet (e-mail):

Rasmus Broen Pedersen, ALTox a/s (rbp@altox.dk)

2. Hazards identification**Particular information pertaining specific risk for human and environment**

Oxidizing and harmful tablets that are dangerous for the environment and may cause cancer, allergy and heritable genetic damage.

Classification: O;R8 Carc Cat 3;R40 R43 Muta Cat 3;R68 R52/53**3. Composition/Information on ingredients**

| % w/w | Chemical name | CAS no. | EINECS/ELINCS | Classification |
|-------|--------------------|-----------|---------------|--|
| 1-2,5 | o-Phenylenediamine | 95-54-5 | 202-430-6 | Xn;R20/21 T;R25 Xi;R36 Carc Cat 3;R40 R43 Muta Cat 3;R68 N;R50/53 (M=1) O;R8 |
| - | Potassium nitrate | 7757-79-1 | 231-818-8 | |

Wording of R-phrases - see section 16.

4. First-aid measures**Eye contact**

Flush thoroughly with water or physiological salt water, holding eye lids open.

Remember to remove contact lenses, if any. If irritation persists: seek medical advice.

Skin contact

Remove all contaminated clothing and wash subsequently with water and soap. Rub with a fatty creme to prevent dryness. If person feels queasy/discomfort: seek medical advise.

Inhalation

Go to fresh air. Keep at rest. If person feels queasy/discomfort: seek medical advise.

IngestionRinse mouth and drink plenty of water. **Do not induce vomiting.** If vomiting occurs keep the head down to prevent vomit getting into the lungs. Call an ambulance.**Burning**

Flush with water until pain ceases. Remove clothes that isn't burnt to the skin. If needed get medical attention, continue to flush on the way.

Information

Show this Safety Data Sheet to a physician or emergency ward.

Trade name: **OPD Tablets 2 mg****5. Fire-fighting measures****Flammability**

Not combustible (see section 10).

Extinguishing media - suitable

Use water, dry chemical, foam or carbon dioxide.

Extinguishing media - NOT suitable

-

Special risks in a fire situation

At fire the product may form hazardous decomposition products such as: oxides of carbon and nitrogen.

Protective equipment

When extinguishing fires use breathing apparatus with an independent source of air.

Additional information

Remove containers if possible

6. Accidental release measures**Personal precautions**

Provide for sufficient ventilation/respiratory protection.

See protective equipment listed in section 8.

Environmental precautions

Do not empty into drains. See section 12. If the product contaminates sewages, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up/collecting

Collect spilled material and place spillage in a plastic container. Subsequently wash area with plenty of water. Further handling of spillage - see section 13.

7. Handling and storage**Safe handling**

See section 8.

Safe storage

At 4°C (short time storage). For long time storage: at -20°C. Keep the lid of the container tightly closed during storage of the tablets. Do not remove the included drying capsule. Protected against light.

Specific use(s):

See section 1.

8. Exposure controls and personal protection**Engineering measures (prevention of worker exposure)**

Avoid all contact with skin, eyes and clothes. Do NOT use metal forceps during handling of the tablets. Protect the solution against direct sunlight (see section 10). Avoid breathing dust. Wash with soap and water if contact with skin and clothes.

Contaminated clothes must be kept under water until it can be cleaned.

The employer shall assess the working conditions and, if there is any risk to the safety or health and any effects on the pregnancy or breastfeeding of workers, take the necessary measures to adjust the working conditions (Directive 92/85/EEC). Do not use near open flames and sparks. No smoking.

Exposure limits: Potassium nitrate: 5 mg/m³ (OEL-The Netherlands)
 o-Phenylenediamine: 0,1 mg/m³ (ACGIH)

Personal protective equipment

Eye protection: Wear close-fitting safety goggles when risk of splashes during manufacture of solution.

Skin protection: Not required when forceps is used. Otherwise use gloves of nitrile rubber.

Breakthrough time: unknown - change gloves if exposed.

Respiratory protection: Not required if used at proper ventilation.

Environmental exposure controls: -

Trade name: **OPD Tablets 2 mg**

9. Physical and chemical properties

| | |
|-----------------------------|---------|
| Appearance: | Tablets |
| Odour: | - |
| pH: | - |
| Boiling point (°C): | - |
| Flash point (°C): | - |
| Density (g/ml): | - |
| Solubility in water: | Soluble |

10. Stability and reactivity

Stability

Not combustible, but enhances combustion of other substances. Risk of fire as a result of mixing with combustible and reducing substances.

Conditions to avoid

Avoid heat and light.

Materials to avoid

Avoid contact with combustible materials and metals (metals works as catalysts for the oxidation process).

Hazardous decomposition products

At fire the product may form hazardous decomposition products: oxides of carbon and nitrogen.

11. Toxicological information

Routes of exposure: May be absorbed through skin, by inhalation and ingestion.

Acute toxicity:

Eyes: Irritation.

Skin: May cause irritation. *o*-Phenylenediamine may be absorbed through the skin.

Inhalation: Inhalation of tablet dust can cause irritation of the respiratory tract. Symptoms can be coughing and shortness of breath.

Ingestion: May cause irritation of the gastrointestinal tract and in large doses: dizziness, abdominal pain, neurological disorders and jaundice.

Potassium nitrate can form potassium nitrite in the organism. Nitrite is poisonous, and can react with amines in the body to form carcinogenic nitrosamines.

Long term toxicity: *o*-Phenylenediamine may cause cancer and heritable genetic damage. May also cause allergy and sensitivity in the lungs (asthma). Serious damage on liver, kidneys and spleen. Damage on the central nervous system. Exposure by potassium nitrate can involve anaemia and formation of methemoglobin.

12. Ecological information

Ecotoxicity:

o-Phenylenediamine is very toxic to aquatic organisms. EC₅₀ (daphnia, 48h) = 0,16 mg/l.

Mobility:

Soluble.

Persistence and degradability:

o-Phenylenediamine is not readily biodegradable. May cause long-term adverse effects in the aquatic environment.

Bioaccumulative potential:

Log K_{OW} of *o*-Phenylenediamine is 0.15 (properly does not accumulate).

Other adverse effects:

-

Trade name: **OPD Tablets 2 mg****13. Disposal considerations**

Disposal should be according to local, state or national legislation. Dispose of through authority facilities or pass to chemical disposal company.

EWC-code: 16 04 03

14. Transport information**Road/Rail (ADR/RID)**

Class : 5.1

UN No. : 1477

Proper Shipping Name: Nitrates, inorganic, n.o.s.
(potassium nitrate)

Limited quantities:

Combination Packaging's: Max. inner packaging 1 kg. Max. 30 kg per package.

Shrink/Stretch wrapped: Max. inner packaging 1 kg. Gross weight per package 20 kg.

Sea (IMDG)

IMDG Class : 5.1

UN No. : 1477

MARPOL: P

Pack. Group : III EmS: F-A, S-Q

Proper Shipping Name: Nitrates, inorganic, n.o.s.
(potassium nitrate)

Limited quantities: 5 kg

15. Regulatory information

Classification according to EEC directives

EINECS no.: -

Danger symbol and danger designation:



Harmful



Oxidising

Contains: o-Phenylenediamine & Potassium nitrate

Risk-phrases:

- R 8: Contact with combustible material may cause fire.
- R 40: Limited evidence of a carcinogenic effect.
- R 43: May cause sensitisation by skin contact.
- R 68: Possible risk of irreversible effects.
- R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety-phrases:

- S 17: Keep away from combustible material.
- S 24: Avoid contact with skin.
- S 36/37: Wear suitable protective clothing and gloves.
- S 61: Avoid release to the environment. Refer to special instructions / Safety Data Sheets.

Restriction on application

Restricted use: must not be used by persons under 18 years of age.

Trade name: **OPD Tablets 2 mg****16. Other information****R-phrases mentioned in section 3:**

- R 8: Contact with combustible material may cause fire.
R 20/21: Harmful by inhalation and in contact with skin.
R 25: Toxic if swallowed.
R 36: Irritating to eyes.
R 40: Limited evidence of a carcinogenic effect.
R 43: May cause sensitisation by skin contact.
R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 68 Possible risk of irreversible effects.

Requirements concerning special training

No special training is anticipated, however, the user should be well instructed for the execution of his task, have knowledge of this Safety Data Sheet and normal training in the use of personal protective equipment.

Edition no.: 09**(Revision) Date:** 11 November 2008**Changes in section(s):**

1, 2, 3, 4, 8, 11, 13, 15 and 16

This Safety Data Sheet was created by:

Alttox a/s - Godthaabsvej 177 - DK-2720 Vanløse - Denmark

Tel. +45 38 34 77 98 - Fax +45 38 34 77 99 /RBP - Quality control: PW

Material Safety Data Sheet