

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 03.09.2007

Revision: 03.09.2007

1 Identification of substance:

- **Product details:**
- **Trade name:** **Tetrahydrophthalic Anhydride (THPA)**
(with no more than 0,05% maleic anhydride)
- **Application of the substance / the preparation**
Intermediate
Manufacturing of resins and adhesives
- **Supplier/Manufacturer:**
Penpet Petrochemical Trading GmbH
Mercur-Park
Sieker Landstrasse 126
22143 Hamburg
Germany
Tel: +49 40 675 799 0
Fax: +49 40 675 799 99 / 88
- **Email competent person:** angelika.torges@kft.de
- **Information department:** see above
- **Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Hazards identification

- **Hazard description:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment:**
R 41 Risk of serious damage to eyes.
R 42/43 May cause sensitisation by inhalation and skin contact.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.
- **Additional information:** Aqueous solutions of the substance are acidic.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description:**
85-43-8 1,2,3,6-tetrahydrophthalic anhydride
- **Identification number(s):**
- **EINECS Number:** 201-605-4
- **EU Number:** 607-099-00-5

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Remove victim from contaminated area. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Call a doctor.
In case of unconsciousness, place patients on their side in a stable position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.

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- Seek medical treatment.
- **After eye contact:**
 - Protect unharmed eye.
 - Rinse the eyes with open eyelids for 10 - 15 minutes with water.
 - Immediate transport to ophthalmologist or ophthalmic clinic.
- **After swallowing:**
 - Rinse out mouth and then drink plenty of water.
 - Never give anything by mouth to a unconscious person.
 - Administer medicinal carbon
 - Induce vomiting if large quantities are ingested.
 - Hold the head of the casualty low with the body in a prone position in order to avoid aspiration.
 - Call for a doctor immediately.
- **Information for doctor:**
- **Treatment:**
 - In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.
 - Symptomatic treatment

5 Fire fighting measures

- **Suitable extinguishing agents:**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
 - Use fire fighting measures that suit the environment.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
 - Dangerous decomposition product see chapter 10: stability and reactivity
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:**
 - Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone
 - 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.

6 Accidental release measures

- **Person-related safety precautions:**
 - Ensure adequate ventilation
 - Wear protective clothing.
 - Keep unprotected persons away.
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
 - Do not smoke - keep ignition sources away
 - Keep away from water and humidity.
- **Measures for environmental protection:**
 - Do not allow product to reach sewage system or any water course.
 - Do not allow to penetrate the ground/soil.
- **Measures for cleaning/collecting:**
 - Pick up mechanically.
 - Avoid dust formation absolutely. If necessary pick up with a tested and approved industrial vacuum cleaner.
 - Send for recovery or disposal in suitable receptacles.
 - Dispose contaminated material as waste according to item 13.

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7 Handling and storage

· Handling

· Information for safe handling:

- Ensure good ventilation/exhaustion at the workplace.
- Any deposit of dust which cannot be avoided must be regularly removed.
- Prevent formation of dust.
- Avoid contact with eyes and skin.
- Keep the working area dry and clean.

· Information about protection against explosions and fires:

- Dust can combine with air to form an explosive mixture.



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges

· Storage

· Requirements to be met by storerooms and receptacles:

- Store cool and dry.
- Provide acid-resistant floor.
- Prevent any seepage into the ground.

· Information about storage in one common storage facility:

- Store away from foodstuffs.
- Store away from feed.

· Further information about storage conditions: Protect from humidity and water.

· Storage class 8 Corrosive products (VCI)

8 Exposure controls and personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Components with limit values that require monitoring at the workplace: Not required.

· Additional Occupational Exposure Limit Values for possible hazards during processing:

- Observe general threshold limit for dust.

· Additional information: The lists that were valid during the creation were used as basis.

· Personal protective equipment

· General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Vacuum clean contaminated clothing. Do not blow or brush off contamination.
- Do not inhale dust / smoke / mist.
- Avoid contact with the eyes and skin.
- Do not eat or drink while working.
- Wash hands before breaks and at the end of work.
- Use skin protection cream for skin protection.
- Provide eye bath.
- If larger quantities are handled provide emergency showers.

· Breathing equipment:

- Not necessary if room is well-ventilated.



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

- Filter P2.
- Filter P3.

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Protection of hands:

Chemical resistant gloves

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

After use of gloves apply skin-cleaning agents and skin cosmetics.

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 protection: Tightly sealed goggles.**Body protection:**

Protective work clothing.

According to hazard:

Apron

Boots

Use protective suit.

9 Physical and chemical properties:

General Information

Form: Crystalline
Colour: White
Odour: Odourless

Change in condition:**Melting point/Melting range:** 100°C**Boiling point/Boiling range:** undetermined**Flash point:** 156°C (closed cup)**Flammability (solid, gaseous)** Product is not flammable.**Ignition temperature:** 400°C**Danger of explosion:** Product is not explosive. However, formation of explosive air/dust mixtures is possible.**Vapour pressure at 20°C:** 0.013 mbar**Density at 25°C:** 1.375 g/cm³**Solubility in / Miscibility with****Water at 20°C:** 10 g/l
Hydrolysing**pH-value (10 g/l) at 20°C:** 2.1

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.**Materials to be avoided:**

Oxidants

Water and humidity

Dangerous reactions: Reacts violently with water**Dangerous products of decomposition:**

In the case of fire or at high temperatures the formation of the following decomposition products is possible.

Poisonous gases/vapours

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11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Prolonged exposition may cause skin irritation.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:**
 Sensitization possible through inhalation.
 Sensitization possible through skin contact.
- **Additional toxicological information:**
 In contact with humidity the irritant effect on human tissue is more intensive.
 After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
- **Sensitisation** May cause sensitisation by inhalation and skin contact.

12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **Remark:** Harmful effect by pH-value shift.
- **General notes:**
 Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 Danger to drinking water is possible if large quantities leak into the ground or into water course.

13 Disposal considerations

- **Product:**
- **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal according to instructions of local authorities.

- **European waste catalogue:**

07 01 99 wastes not otherwise specified

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

- **Land transport ADR/RID (cross-border)**

- **ADR/RID class:** -
 No hazardous good according to the regulation.
- **Description of goods:** 2698 TETRAHYDROPHthalic ANHYDRIDES
- **Remarks:** Phthalic anhydride in the solid state and tetrahydrophthalic anhydride, with no more than 0,05% maleic anhydride, are not subject to these regulations. Phthalic anhydride molten at a temperature above its flashpoint, with not more than 0,05% maleic anhydride should be classified under UN 3256.

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· **Maritime transport IMDG:**

· **IMDG Class:** -
 No hazardous good according to the regulation.

· **Marine pollutant:** No

· **Remarks:** Phthalic anhydride in the solid state and tetrahydrophthalic anhydride, with no more than 0,05% maleic anhydride, are not subject to these regulations. Phthalic anhydride molten at a temperature above its flashpoint, with not more than 0,05% maleic anhydride should be classified under UN 3256.

A consignment of this substance that is accompanied by a shipper's certificate stating that it does not contain more than 0,05% maleic anhydride is not subject to the provision of this Code.

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** -
 No hazardous good according to the regulation.

· **Remarks:** Phthalic anhydride in the solid state and tetrahydrophthalic anhydrides, with 0,05% or less maleic anhydride, are not subject to these Regulations. Phthalic anhydride molten at a temperature above its flashpoint, with 0,05% or less maleic anhydride must be classified under UN 3256.

15 Regulations

· **Markings according to EC guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials "EC-labelling"

· **Code letter and hazard designation of product:**



Xn Harmful

· **Risk phrases:**

41 Risk of serious damage to eyes.
 42/43 May cause sensitisation by inhalation and skin contact.
 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

22 Do not breathe dust.
 24 Avoid contact with skin.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 37/39 Wear suitable gloves and eye/face protection.
 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

· **National regulations**

· **Information about limitation of use:**

The number of employees handling this chemical substance has to be kept as small as possible.
 Employment restrictions concerning pregnant and lactating women must be observed.
 Restrictions on juvenile employment must be observed.

· **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.

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.

· **Reasons for amendments:**

Change of trade name
 Transport classification

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Regulation (EC) No. 1907/2006

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· Contact: Angelika Torges**· * Data compared to the previous version altered.**

Changes have been made to chapters marked with a *, as compared to the previous version.

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