

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

1 Identification of substance:

Product details:**Trade name:** Phthalic Anhydride (PA) solid**Application of the substance / the preparation**Raw materials for coatings
Polyester resin
Plasticizer**Supplier/Manufacturer:**Penpet Petrochemical Trading GmbH
Merkur-Park
Sieker Landstrasse 126
22143 Hamburg
Germany
Tel: +49 40 675 799 0
Fax: +49 40 675 799 99 / 88**Information department:** see above**Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Composition/Data on components:

Chemical characterization:**CAS No. Description:**

85-44-9 phthalic anhydride

Identification number(s):**EINECS Number:** 201-607-5**EU Number:** 607-009-00-4

3 Hazards identification

Hazard description:

Xn Harmful

Information pertaining to particular dangers for man and environment:

R 22 Harmful if swallowed.

R 37/38 Irritating to respiratory system and skin.

R 41 Risk of serious damage to eyes.

R 42/43 May cause sensitisation by inhalation and skin contact.

Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

4 First aid measures

General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident.

Take affected persons out of danger area and lay them down.

After inhalation:

Supply fresh air and be sure to call for a doctor.

In case of unconsciousness, place patients on their side in a stable position for transportation.

After skin contact:

Clean effected skin thoroughly with water and a mild cleansing agent. No residues shall remain on the skin.

(Contd. on page 2)

— GB —

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

Trade name: Phthalic Anhydride (PA) solid

(Contd. of page 1)

If skin irritation continues, consult a doctor.

- **After eye contact:**
Protect unharmed eye.
Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult an eye specialist immediately.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Never give anything by mouth to a unconscious person.
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously:
Hold the head of the casualty low with the body in a prone position in order to avoid aspiration.
- **Information for doctor:**
- **The following symptoms may occur:**
Local irritation symptoms
Cough
Asthma attacks
- **Treatment:** In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.

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.
- **For safety reasons unsuitable extinguishing agents:** Direct jet water
- **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
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**
Avoid formation of dust.
Ensure adequate ventilation



Wear protective equipment. Keep unprotected persons away.

- **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:**
Avoid dust formation absolutely. If necessary pick up with a tested and approved industrial vacuum cleaner.
Ensure adequate ventilation.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.

(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

Trade name: Phthalic Anhydride (PA) solid

(Contd. of page 2)

Any deposit of dust which cannot be avoided must be regularly removed.

Avoid inhalation of dust.

Avoid contact with eyes and skin.

· **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 container tightly sealed at a cool and dry place with sufficient ventilation.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from feed.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

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:**

85-44-9 phthalic anhydride

MEL Short-term value: 12 mg/m³

Long-term value: 4 mg/m³

Sen

· **Personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Vacuum clean contaminated clothing. Do not blow or brush off contamination.

Avoid contact with eyes and skin absolutely.

Use skin protection cream for skin protection.

· **Breathing equipment:**



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 A/P2.

· **Protection of hands:**

Chemical resistant gloves

Check the permeability prior to each renewed use of the glove.

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

Preventive skin protection by use of skin-protecting agents is recommended.

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.

For undissolved solid substances following materials may be suitable:

Nitrile rubber, NBR

Butyl rubber, BR

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

Trade name: Phthalic Anhydride (PA) solid

(Contd. of page 3)

Polychloroprene rubber (CR)

Fluorocarbon rubber (FKM)

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.

9 Physical and chemical properties:

General Information

Form: Crystalline
Colour: White
Odour: Aromatic

Change in condition:

Melting point/Melting range: 130.8°C
Boiling point/Boiling range: 285°C
sublimates

Flash point: 152°C**Ignition temperature:** 580°C**Danger of explosion:** Product is not explosive. However, formation of explosive air/dust mixtures is possible.**Explosion limits:**

Lower: 1.7 Vol %
Upper: 10.5 Vol %

Vapour pressure at 20°C: 0.00027 hPa**Density at 20°C:** 1.527 g/cm³**Solubility in / Miscibility with**

Water at 20°C: 6 g/l
Hydrolizes forming phthalic acid

Segregation coefficient (n-octanol/water): < 1 log POW

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

To avoid thermal decomposition do not overheat.

Materials to be avoided:

Nitric acid

Metals

Water and humidity

Dangerous reactions:

Risk of dust explosion if enriched with fine dust in the presence of air

Reactions with above-mentioned substances

Dangerous products of decomposition:

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

Carbon monoxide

Irritant gases/vapours

11 Toxicological information

Acute toxicity:**LD/LC50 values that are relevant for classification:****85-44-9 phthalic anhydride**Oral LD₅₀ 1530 mg/kg (rat)

(Contd. on page 5)

GB

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

Trade name: Phthalic Anhydride (PA) solid

(Contd. of page 4)

- **Primary irritant effect:**
- **on the skin:**
Irritant to skin and mucous membranes.
Product dust is irritating the upper respiratory tract.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Other information (about experimental toxicology):**
- **Mutagenic effects and reproductive toxicity:** Evaluation of reproductive toxicity has not been finished yet.

12 Ecological information

- **Information about elimination (persistence and degradability):**
- **Other information:** The product is readily biodegradable.
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Bioaccumulation is not to be expected ($\log P_{o/w} < 1$)
- **Ecotoxicological effects:**
- **Aquatic toxicity:**

85-44-9 phthalic anhydride

LC₅₀/96h 313 mg/l (leuciscus idus)

- **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 07 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:** 8 (C4) Corrosive substances.
- **Danger code (Kemler):** 80
- **UN-Number:** 2214
- **Packaging group:** III
- **Label:** 8
- **Description of goods:** 2214 PHTHALIC ANHYDRIDE

(Contd. on page 6)

— GB —

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

Trade name: Phthalic Anhydride (PA) solid

(Contd. of page 5)

- **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.

- **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 2214
- **Label:** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Proper shipping name:** PHTHALIC ANHYDRIDE
- **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:** 8
- **UN/ID Number:** 2214
- **Label:** 8
- **Packaging group:** III
- **Proper shipping name:** PHTHALIC ANHYDRIDE
- **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:**
 - 22 Harmful if swallowed.
 - 37/38 Irritating to respiratory system and skin.
 - 41 Risk of serious damage to eyes.
 - 42/43 May cause sensitisation by inhalation and skin contact.
- **Safety phrases:**
 - 23 Do not breathe fumes/aerosol.
 - 24/25 Avoid contact with skin and eyes.
 - 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.
 - 46 If swallowed, seek medical advice immediately and show this container or label.

(Contd. on page 7)

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 01.12.2006

Reviewed on: 01.12.2006

Trade name: Phthalic Anhydride (PA) solid

(Contd. of page 6)

- **National regulations**
 - **Information about limitation of use:**
Restrictions on juvenile employment must be observed.
Employment restrictions concerning pregnant and lactating women 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.

- **Department issuing MSDS:**
KFT-Chemieservice Marienstr. 3 D-64347 Griesheim
Postfach 1451 D-64345 Griesheim
Tel.: +49-6155-823241 Fax: +49-6155-823246
 - **Contact:** Angelika Torges
 - **Sources:** ESIS (European existing Substances Information System)
-