

# Material Safety Data Sheet

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

Printing date: 12.01.2007

Reviewed on: 12.01.2007

### 1 Identification of substance:

- **Product details:**
- **Trade name: Methylhexahydrophthalic Anhydride (MHHPA)**
- **Application of the substance / the preparation**  
Hardening agent/ Curing agent  
for epoxide resins
- **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:**  
25550-51-0 hexahydromethylphthalic anhydride
- **Identification number(s):**
- **EINECS Number:** 247-094-1
- **EU Number:** 607-241-00-6

### 3 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.
- **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.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness, place patients on their side in a stable position for transportation.
- **After skin contact:**  
Remove soiled clothes and shoes.  
Clean effected skin thoroughly with water and a mild cleansing agent. No residues shall remain on the skin.  
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 mouth with water.

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(Contd. of page 1)

Give some milk.  
Induce vomiting and call for medical help.

- **Information for doctor:**
- **Treatment:** Symptomatic treatment

## 5 Fire fighting measures

- **Suitable extinguishing agents:**  
Carbon dioxide (CO<sub>2</sub>)  
Fire-extinguishing powder  
Foam  
Water jet spray  
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.
- **Additional information:**  
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.  
Cool endangered receptacles with water spray.

## 6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

- Ensure adequate ventilation  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Avoid contact with eyes and skin.
- **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:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents  
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.  
Carry out filling operations only at sites with extractors available.  
Avoid contact with eyes and skin.  
Avoid inhalation of vapours.  
Keep the working area dry and clean.
- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

(Contd. on page 3)

— GB —

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(Contd. of page 2)

- **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:** Protect from humidity and water.
- **Storage class** 10 Combustible liquids

### 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 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  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
Do not inhale gases / fumes / aerosols.  
Provide eye bath.  
If larger quantities are handled provide emergency showers.

- **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.



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.

- **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:**

Basket goggles (DIN EN 58211, code number 3) or face protection shield.  
If vapours or aerosols arise which may injure the eyes ,  
wearing of a full mask is recommended.

- **Body protection:** Protective work clothing.

### 9 Physical and chemical properties:

- **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Aromatic

- **Change in condition:**

**Melting point/Melting range:** -29°C  
**Boiling point/Boiling range:** 168/27mbar°C

- **Flash point:** 145°C

(Contd. on page 4)

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(Contd. of page 3)

- **Danger of explosion:** Product does not present an explosion hazard.
- **Vapour pressure at 20°C:** < 0.01 mbar
- **Density at 20°C:** 1.15 g/cm<sup>3</sup>
- **Solubility in / Miscibility with Water:** decomposes slowly
- **Viscosity:**
  - dynamic at 25°C: 40 - 60 mPas

## 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.  
Conditions to be avoided: see chapter 7
- **Materials to be avoided:** Water and humidity
- **Dangerous reactions:** Exothermic reaction with water.
- **Dangerous products of decomposition:**  
In the case of fire or at high temperatures the formation of the following decomposition products is possible.  
Carbon monoxide and carbon dioxide

## 11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**  
Oral LD<sub>50</sub> 6850 mg/kg (rat)
- **Primary irritant effect:**
  - **on the skin:** May cause irritation to the skin.
  - **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.

## 12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **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.

## 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 02 08 other still bottoms and reaction residues

(Contd. on page 5)

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(Contd. of page 4)

- **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.
- **Maritime transport IMDG:**
- **IMDG Class:** No hazardous good according to the regulation.
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** No hazardous good according to the regulation.

### 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.
- **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.
- **National regulations**
- **Information about limitation of use:**  
Restrictions on juvenile employment must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **Technical guidance (air):**
- **Class Share in %**
- **I** 100.0
- **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:**  
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Tel.: +49-6155-823241 Fax: +49-6155-823246
- **Contact:** Angelika Torges