

# Material Safety Data Sheet

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

Printing date: 19.12.2006

Reviewed on: 19.12.2006

### 1 Identification of substance:

**Product details:**

- Trade name: **Diocetylphthalate (DOP)**
- Application of the substance / the preparation 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:  
117-81-7 bis(2-ethylhexyl) phthalate
- Identification number(s):
- EINECS Number: 204-211-0

### 3 Hazards identification

**Hazard description:**

Repr. Cat. 2  
T Toxic

**Information pertaining to particular dangers for man and environment:**

R 60 May impair fertility.  
R 61 May cause harm to the unborn child.  
Only for trade users / technical specialists

**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:**

First aid personnel should pay attention to their own safety.  
Take affected persons out of danger area and lay them down.  
Immediately remove any clothing soiled by the product.

**After inhalation:**

In case of contact with vapors and aerosols which may be formed at higher temperatures:  
Remove victim from contaminated area. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Call a doctor.

**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 extensive or prolonged contact:  
Seek medical treatment.

(Contd. on page 2)

— GB —

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### Trade name: Dioctylphthalate (DOP)

(Contd. of page 1)

- **After eye contact:**  
Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor or better an eye specialist.
- **After swallowing:**  
Rinse mouth with water.  
Drink plenty of water, but never give anything to an unconscious person.  
Administer medicinal carbon  
Do not administer milk or alcohol.  
Do not administer edible oils or ricinus oil.  
If vomiting occurs spontaneously:  
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:**
- **The following symptoms may occur:**  
After inhalation:  
Irritation of mucuous membranes  
After swallowing:  
Nausea  
Diarrhoea  
After resorption of larger quantities:  
Unconsciousness  
Cramp
- **Treatment:**  
Symptomatic treatment  
(decontamination, vital functions)

## 5 Fire fighting measures

- **Suitable extinguishing agents:**  
Foam  
Water jet spray  
Fire-extinguishing powder  
Carbon dioxide (CO<sub>2</sub>)  
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:**  
Cool endangered receptacles with water spray.  
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:**  
Wear protective clothing.  
Keep unprotected persons away.  
Ensure adequate ventilation  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **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.  
Send for recovery or disposal in suitable receptacles.  
Dispose contaminated material as waste according to item 13.

(Contd. on page 3)

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Printing date: 19.12.2006

Reviewed on: 19.12.2006

### Trade name: Dioctylphthalate (DOP)

(Contd. of page 2)

**Additional information:**

- See Section 8 for information on personal protection equipment.
- See Section 7 for information on safe handling

## 7 Handling and storage

**Handling****Information for safe handling:**

- Ensure good ventilation/exhaustion at the workplace.
- Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- Waste air is to be released into the atmosphere only via suitable separators.
- Restrict the quantity stored at the work place.
- Keep the working area dry and clean.
- Avoid contact with eyes and skin.
- Prevent formation of aerosols.
- Avoid inhalation of vapours.
- Observe the special requirements for handling carcinogenic and mutagenic chemical substances as outlined in directive 90/394/EEC in its current version.

**Information about protection against explosions and fires:**

- Emergency cooling must be available in case of nearby fire.



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.
- For storage observe regulations for toxic materials.

**Further information about storage conditions:**

- Store receptacle in a well ventilated area.
- Store under lock and key and with access restricted to technical experts or their assistants only.

**Storage class 6.1A flammable toxic substances**

## 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:****117-81-7 bis(2-ethylhexyl) phthalate**

WEL (Great Britain) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>

**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.
- Do not eat or drink while working.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with eyes and skin absolutely.
- Ensure that washing facilities are available at the work place.

(Contd. on page 4)

## Material Safety Data Sheet

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

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Reviewed on: 19.12.2006

**Trade name: Dioctylphthalate (DOP)**

(Contd. of page 3)

**· Breathing equipment:**

In case of mist and up to 0,1 Vol.% filter device with combination filter A1-P1 (EN 141; colour code brown/white)  
 up to 0,5 Vol.% combination filter A2-P2,  
 up to 1,0 Vol.% A3-P3, above and in case of unclear conditions use respirator equipment which is independent of the ambient air.

**· 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

**· 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.

Nitrile rubber, NBR  
 Butyl rubber, BR  
 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.  
 480 min.(butyl rubber 0,5 mm)  
 480 min. FKM ( 0,4 mm)  
 480 min. NBR (0,35 mm)

**· Not suitable are gloves made of the following materials:**

Natural rubber, NR  
 Polychloropren rubber (CR)

**· Eye protection:** Safety glasses

**· Body protection:** Impervious protective clothing

## 9 Physical and chemical properties:

**· General Information**

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

**· Change in condition:**

<b>Melting point/Melting range:</b>	-46°C
<b>Boiling point/Boiling range:</b>	7hPa/230-233°C
<b>Pour point:</b>	ca. - 42°C (DIN/ISO 3016)

**· Flash point:** 206°C (ISO 2592)

**· Ignition temperature:** ca. 350°C (DIN 51794)

**· Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**· Explosion limits:**

<b>Lower:</b>	0.13 Vol %
<b>Upper:</b>	0.18 Vol %

**· Vapour pressure at 20°C:** <0.001 mbar

**· Density at 20°C:** 0.983-0.986 g/cm<sup>3</sup> (DIN 51757)

**· Solubility in / Miscibility with Water at 20°C:** <0.1 g/l

**· pH-value (- g/l) :** neutral

**· Segregation coefficient (n-octanol/water):** 7.6 log POW

**· Viscosity:**

**dynamic at 20°C:** 77-82 mPas (DIN 51562)

(Contd. on page 5)

## Material Safety Data Sheet

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

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Reviewed on: 19.12.2006

**Trade name: Dioctylphthalate (DOP)**

(Contd. of page 4)

### 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

To avoid thermal decomposition do not overheat.

**Materials to be avoided:**

Oxidants

Strong acids

Strong bases

Chlorine

Nitrates

**Dangerous reactions:** 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 and carbon dioxide

Corrosive gases/vapours

### 11 Toxicological information

**Acute toxicity:****LD/LC50 values that are relevant for classification:****117-81-7 bis(2-ethylhexyl) phthalate**

Oral LD50 30600 mg/kg (rat)

Dermal LD50 25000 mg/kg (rabbit)

Inhalative LC<sub>50</sub>/4 h > 10.6 mg/l (rat)**Primary irritant effect:****on the skin:** No irritating effect.**on the eye:** No irritating effect.**Sensitization:** No sensitizing effects known.**Other information (about experimental toxicology):** Ames-test: no mutagenic effects**Additional toxicological information:**

After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

### 12 Ecological information

**Information about elimination (persistence and degradability):****Other information:** The product is biodegradable.**Behaviour in environmental systems:****Mobility and bioaccumulation potential:** log P (o/w) >3 - Considerable bioaccumulation is to be expected**Ecotoxicological effects:****Aquatic toxicity:****117-81-7 bis(2-ethylhexyl) phthalate**LC<sub>50</sub>/96h > 0.17 (Sheepshead minnow)

&gt; 0.32 mg/l (Onchorhynchus mykiss)

**Remark:** Toxicity is above water solubility of the substance.**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.

(Contd. on page 6)

GB

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

Printing date: 19.12.2006

Reviewed on: 19.12.2006

**Trade name: Dioctylphthalate (DOP)**

(Contd. of page 5)

Must be specially treated adhering to official regulations.

· **European waste catalogue:**

07 02 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.

· **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:**



Repr. Cat. 2  
T Toxic

· **Risk phrases:**

60 May impair fertility.

61 May cause harm to the unborn child.

· **Safety phrases:**

53 Avoid exposure - obtain special instructions before use.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **Special labelling of certain preparations:**

Only for trade users / technical specialists

· **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.

· **Other regulations, limitations and prohibitive regulations**

It is prohibited to place toys and childcare articles intended to be placed in the mouth by children under three years of age made of soft PVC on the market which are containing this substance. (Decision 1999/815/EC with EEA relevance).

Observe national regulations regarding chemicals being harmful for the unborn child.

Observe national regulations for hazardous materials at the workplace.

### 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

(Contd. on page 7)

**Material Safety Data Sheet**  
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**Trade name: Dioctylphthalate (DOP)**

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(Contd. of page 6)

- **Contact:** Angelika Torges
  - **Sources:** ESIS (European existing Substances Information System)
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— GB —