1. Product and Company Identification

Use: Chemical

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA

2. Hazards Identification

Emergency overview

CAUTION:
Contains a suspect carcinogen.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of mists/vapours.
Use with local exhaust ventilation.
Wear a NIOSH-certified (or equivalent) organic vapour respirator.
Wear safety glasses with side-shields.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.

State of matter: liquid
Colour: colourless
Odour: mild

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Irritation / corrosion:
Not irritating to the skin. Not irritating to the eyes.

Sensitization:
Skin sensitizing effects were not observed in animal studies.
Chronic toxicity:

**Carcinogenicity:** In long-term studies in rodents exposed to high doses, a tumorigenic effect was found; however, these results are thought to be due to a rodent-specific liver effect that is not relevant to humans. The International Agency for Research on Cancer (IARC) has classified this substance as group 3, not classifiable as to its carcinogenicity to humans. NTP listed carcinogen.

**Repeated dose toxicity:** Repeated exposure to high doses of the substance causes reversible liver changes in rodents. According to present knowledge, these effects do not occur in man.

**Reproductive toxicity:** The results of animal studies suggest a fertility impairing effect.

**Teratogenicity:** The substance caused malformations/developmental toxicity in laboratory animals. Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

**Genotoxicity:** Most of the results from the numerous studies available show no evidence of a mutagenic effect.

**Potential environmental effects**

**Aquatic toxicity:**
No toxic effects occur within the range of solubility. There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>117-81-7</td>
<td>&gt; 99.6 %</td>
<td>Di-ethylhexylphthalate</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

**General advice:**
Remove contaminated clothing.

**If inhaled:**
Keep patient calm, remove to fresh air. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

**If on skin:**
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

**If in eyes:**
Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

**If swallowed:**
Rinse mouth immediately and then drink plenty of water, seek medical attention.

5. Fire-Fighting Measures

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>201 °C</td>
<td>(DIN 51758, closed cup)</td>
</tr>
<tr>
<td>Autoignition</td>
<td>370 °C</td>
<td>(DIN 51794)</td>
</tr>
<tr>
<td>Flammability</td>
<td>does not ignite</td>
<td>(other)</td>
</tr>
<tr>
<td>Self-ignition temperature</td>
<td>not self-igniting</td>
<td>(other)</td>
</tr>
</tbody>
</table>
Suitable extinguishing media:
carbon dioxide, dry extinguishing media, water, foam

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions:
Handle in accordance with good industrial hygiene and safety practice.

Environmental precautions:
Do not empty into drains.

Cleanup:
For small amounts: Spills should be contained, solidified, and placed in suitable containers for disposal.
For large amounts: Pump off product.

7. Handling and Storage

Handling
General advice:
Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame.

Storage
General advice:
Keep container tightly closed.

Storage incompatibility:
General advice: Segregate from strong oxidizing agents.

8. Exposure Controls and Personal Protection

Advice on system design:
Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator as needed. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:
Wear chemical resistant protective gloves.

Eye protection:
Safety glasses with side-shields.
Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Avoid inhalation of mists. Avoid contact with the skin, eyes and clothing.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>mild</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>pH value</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>-55 °C (1,013 hPa)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>385 °C (1,013 hPa)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>negligible</td>
</tr>
<tr>
<td>Density</td>
<td>0.9622 g/cm³ (20 °C, 1,013 hPa)</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow)</td>
<td>7.6 (20 °C) (measured)</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>79 mPa.s (20 °C)</td>
</tr>
<tr>
<td></td>
<td>17 mPa.s (50 °C)</td>
</tr>
<tr>
<td></td>
<td>50 mPa.s (28 °C)</td>
</tr>
<tr>
<td>Particle size</td>
<td>The substance / product is marketed or used in a non solid or granular form.</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>0.285 mg/l (24 °C, 1,013 hPa)</td>
</tr>
<tr>
<td>Solubility (qualitative)</td>
<td>soluble solvent(s): organic solvents,</td>
</tr>
<tr>
<td>Molar mass</td>
<td>390.56 g/mol</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Conditions to avoid:
Avoid all sources of ignition: heat, sparks, open flame.

Substances to avoid:
strong oxidizing agents

Hazardous reactions:
The product is chemically stable.

Decomposition products:
Possible decomposition products: carbon oxides

Thermal decomposition:
No decomposition if used as directed.

Corrosion to metals:
Corrosive effects to metal are not anticipated.

Oxidizing properties:
not fire-propagating (other)

11. Toxicological information

Acute toxicity
Oral:
Type of value: LD50
Species: rat
Value:  > 20,000 mg/kg
Literature data.

Inhalation:
Type of value: LC50
Species: rat
Value:  > 10.62 mg/l
Exposure time: 4 h
An aerosol was tested.
Literature data.

Dermal:
Type of value: LD50
Species: rabbit
Value:  > 24,500 mg/kg
Literature data.

Irritation / corrosion

Skin:
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye:
Species: rabbit
Result: non-irritant
Method: OECD Guideline 405

Sensitization:
Buéhler test
Species: guinea pig
Result: Non-sensitizing.
Method: Guideline 92/69/EEC, B.6
Literature data.

12. Ecological Information

Fish

Acute:
Flow through.
Pimephales promelas/LC50 (96 h):  > 0.67 mg/l
Literature data.

Aquatic invertebrates

Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h):  > 100 mg/l
The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

Daphnia magna/EC50 (48 h):  > 0.16 mg/l
Literature data.

Aquatic plants

Toxicity to aquatic plants:
ETAD method, modified OECD Guideline 201 green algae/EC50 (72 h):  > 130 mg/l
The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Literature data.

green algae/EC50 (96 h): > 0.1 mg/l
Literature data.

Microorganisms

Toxicity to microorganisms:
DIN EN ISO 8192-OECD 209-88/302/EEC, P. C aerobic activated sludge: > 2,000 mg/l
Literature data.

Degradability / Persistence

Biological / Abiological Degradation
Test method: OECD 301B; ISO 9439; 92/69/EEC, C.4-C (aerobic)
Method of analysis: CO2 formation relative to the theoretical value
Degree of elimination: 70 - 80 %
Evaluation: Readily biodegradable (according to OECD criteria).
Readily biodegradable (according to OECD criteria).

Bioaccumulation

Fathead minnow Bioconcentration factor 840
The product may be accumulated in organisms. Literature data.

Other adverse effects:

Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:
Dispose of in a licensed facility. Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

Container disposal:
Empty containers with less than 1 inch of residue may be landfilled at a licensed facility.

14. Transport Information

Reference Bill of Lading

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed
OSHA hazard category: NTP listed carcinogen; Chronic target organ effects reported; ACGIH TLV established
EPCRA 313:

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16. Other Information

Recommended use: for industrial use only
Unsuitable for use: FIFRA pesticide inert;

NFPA Hazard codes:
Health : 1    Fire: 1    Reactivity: 0    Special:

HMIS III rating
Health: 1¤ Flammability: 1   Physical hazard: 0

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

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MSDS Prepared by:
BASF NA Product Regulations
msds@basf.com
MSDS Prepared on: 2010/04/26

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