1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Dimethyl phthalate

Product Number: W508500
Brand: Aldrich
Supplier: Sigma-Aldrich Corporation
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Teratogen

Target Organs
Nerves.

Other hazards which do not result in classification
Rapidly absorbed through skin.

GHS Classification
Eye irritation (Category 2B)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram: none
Signal word: Warning
Hazard statement(s)
H320 Causes eye irritation.
H402 Harmful to aquatic life.
Precautionary statement(s)
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification
Health hazard: 0
Chronic Health Hazard: *
Flammability: 1
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire:  
Reactivity Hazard:  

Potential Health Effects

Inhalation  May be harmful if inhaled. May cause respiratory tract irritation.
Skin  May be harmful if absorbed through skin. May cause skin irritation.
Eyes  May cause eye irritation.
Ingestion  May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>131-11-3</td>
</tr>
<tr>
<td>EC-No.</td>
<td>205-011-6</td>
</tr>
</tbody>
</table>

Molecular Weight 194.18 g/mol

Formula: C\textsubscript{10}H\textsubscript{10}O\textsubscript{4}

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE
Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td>Eye &amp; Upper Respiratory Tract irritation</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.2 mm
Break through time: 480 min
Material tested: Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 120 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: liquid, clear
- Colour: colourless

**Safety data**
- **pH**: no data available
- **Melting point/freezing point**: Melting point/range: 2 °C (36 °F) - lit.
- **Boiling point**: 282 °C (540 °F) - lit.
- **Flash point**: 146.0 °C (294.8 °F) - closed cup
- **Ignition temperature**: 490 °C (914 °F)
- **Auto-ignition temperature**: 490.0 °C (914.0 °F)
- **Flash point**: 146.0 °C (294.8 °F)
- **Auto-ignition temperature**: 556.0 °C (1,032.8 °F)
- **Lower explosion limit**: 0.94 %(V)
- **Upper explosion limit**: 8.03 %(V)
- **Vapour pressure**: 0.0020 hPa (0.0015 mmHg) at 20.0 °C (68.0 °F)
  1.3 hPa (1.0 mmHg) at 100.0 °C (212.0 °F)
- **Density**: 1.19 g/cm³ at 25 °C (77 °F)
- **Water solubility**: slightly soluble
- **Partition coefficient**: log Pow: 1.47
- **Relative vapour density**: no data available
- **Odour**: no data available
- **Odour Threshold**: no data available
- **Evaporation rate**: no data available

### 10. STABILITY AND REACTIVITY

**Chemical stability**
- Stable under recommended storage conditions.

**Possibility of hazardous reactions**
- no data available

**Conditions to avoid**
- no data available

**Materials to avoid**
- Oxidizing agents, acids

**Hazardous decomposition products**
- Hazardous decomposition products formed under fire conditions. - Carbon oxides
- Other decomposition products - no data available

### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
- **Oral LD50**
  - LD50 Oral - rat - 8,239 mg/kg
- **Inhalation LC50**
Dermal LD50
LD50 Dermal - rabbit - > 11,940 mg/kg

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes - rabbit - Mild eye irritation

Respiratory or skin sensitisation
Does not cause skin sensitisation.
Patch test on human volunteers did not demonstrate sensitisation properties.

Germ cell mutagenicity
no data available

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Teratogenicity
Possible risk of congenital malformation in the fetus.

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Signs and Symptoms of Exposure
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Central nervous system depression, Gastrointestinal disturbance, Kidney injury may occur.
Synergistic effects
no data available

Additional Information
RTECS: T11575000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish
LC50 - Pimephales promelas (fathead minnow) - 121.00 mg/l - 96 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 56.00 mg/l - 96 h
LC50 - Lepomis macrochirus (Bluegill) - 50.00 mg/l - 96 h
LC50 - Cyprinodon variegatus (sheepshead minnow) - 29.00 mg/l - 96 h
NOEC - Oncorhynchus mykiss (rainbow trout) - 38 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 46.00 mg/l - 48 h

Persistence and degradability
Biodegradability aerobic
Result: 91 % - Readily biodegradable.
Remarks: no data available

Bioaccumulative potential
Bioaccumulation Lepomis macrochirus (Bluegill) - 21 d
Bioconcentration factor (BCF): 57

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3082  Class: 9  Packing group: III
Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Dimethyl phthalate)
Reportable Quantity (RQ): 5000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
Not dangerous goods
15. REGULATORY INFORMATION

OSHA Hazards
Teratogen

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
Copyright 2013 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.