1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers
   Product name: Phthalimide
   Product Number: 240230
   Brand: Aldrich
   CAS-No.: 85-41-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
   Company: Sigma-Aldrich
   3050 Spruce Street
   SAINT LOUIS MO  63103
   USA
   Telephone: +1 800-325-5832
   Fax: +1 800-325-5052

1.4 Emergency telephone number
   Emergency Phone #: (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
   GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
   Acute aquatic toxicity (Category 3), H402
   For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements
   Pictogram: none
   Signal word: none
   Hazard statement(s)
     H402 Harmful to aquatic life.
   Precautionary statement(s)
     P273 Avoid release to the environment.
     P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
   Synonyms: 1,3-Dihydro-1,3-dioxoisoindole
   Formula: C₈H₅NO₂
   Molecular weight: 147.13 g/mol
   CAS-No.: 85-41-6
   EC-No.: 201-603-3
No components need to be disclosed according to the applicable regulations. For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

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
Flush eyes with water as a precaution.

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

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 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.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
7.3 Specific end use(s)  
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters  
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls  
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection  
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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: 0.11 mm  
  Break through time: 480 min  
  Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

- Splash contact  
  Material: Nitrile rubber  
  Minimum layer thickness: 0.11 mm  
  Break through time: 480 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.

Body Protection  
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection  
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance  
   Form: flakes  
   Colour: beige

b) Odour  
   No data available
c) Odour Threshold No data available
d) pH 3.8 at 0.6 g/l
e) Melting point/freezing point Melting point/range: 232 - 235 °C (450 - 455 °F) - lit.
f) Initial boiling point and boiling range 310 °C (590 °F) at 1,013 hPa (760 mmHg)
g) Flash point 150 °C (302 °F) - closed cup
h) Evaporation rate No data available
i) Flammability (solid, gas) The product is not flammable.
j) Upper/lower flammability or explosive limits No data available
k) Vapour pressure No data available
l) Vapour density No data available
m) Relative density 1.210 g/cm³ at 20 °C (68 °F)
n) Water solubility 0.37 g/l at 25 °C (77 °F)
o) Partition coefficient: n-octanol/water log Pow: 1.1
p) Auto-ignition temperature 530 °C (986 °F)
q) Decomposition temperature No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available

9.2 Other safety information
Bulk density 0.50 - 0.55 g/l

10. STABILITY AND REACTIVITY

10.1 Reactivity No data available

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No data available

10.4 Conditions to avoid No data available

10.5 Incompatible materials Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5
11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male - > 5,000 mg/kg
(OECD Test Guideline 401)

Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitisation
in vivo assay - Mouse
Result: Does not cause skin sensitisation.
(OECD Test Guideline 429)

Germ cell mutagenicity
Ames test
S. typhimurium
Result: negative

Carcinogenicity
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
No data available

Reproductive toxicity - Mouse - Intraperitoneal
Effects on Fertility: Abortion. Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

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

No data available

Developmental Toxicity - Mouse - Intraperitoneal
Specific Developmental Abnormalities: Other developmental abnormalities.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available
12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 20.8 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae
static test EC50 - Pseudokirchneriella subcapitata (algae) - 161 mg/l - 72 h
(OECD Test Guideline 201)

12.2 Persistence and degradability
Biodegradability
aerobic - Exposure time 14 d
Result: 92 % - Readily biodegradable.
(OECD Test Guideline 301C)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

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

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards
Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
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<tbody>
<tr>
<td>Phthalimide</td>
<td>85-41-6</td>
<td></td>
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New Jersey Right To Know Components

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<td></td>
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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
Full text of H-Statements referred to under sections 2 and 3.
H402 Harmful to aquatic life.

HMIS Rating
Health hazard: 0
Chronic Health Hazard: 
Flammability: 1
Physical Hazard 0

NFPA Rating
Health hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0

Further information
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Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

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