1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Undecanoic acid

Product Number: W324507

Brand: Aldrich

Company: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Irritant

GHS Label elements, including precautionary statements

Pictogram

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statement(s)</th>
<th>Precautionary statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warning</td>
<td>H315 Causes skin irritation.</td>
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<tr>
<td>H319 Causes serious eye irritation.</td>
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<tr>
<td>H335 May cause respiratory irritation.</td>
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<tr>
<td>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</td>
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<tr>
<td>P264 Wash skin thoroughly after handling.</td>
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<tr>
<td>P271 Use only outdoors or in a well-ventilated area.</td>
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<tr>
<td>P280 Wear protective gloves/eye protection/face protection.</td>
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<tr>
<td>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</td>
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<tr>
<td>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</td>
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<tr>
<td>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
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</tr>
<tr>
<td>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</td>
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<tr>
<td>P321 Specific treatment (see supplemental first aid instructions on this label).</td>
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<tr>
<td>P332 + P313 If skin irritation occurs: Get medical advice/attention.</td>
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<td></td>
</tr>
<tr>
<td>P337 + P313 If eye irritation persists: Get medical advice/attention.</td>
<td></td>
<td></td>
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<tr>
<td>P362 Take off contaminated clothing and wash before reuse.</td>
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<td></td>
</tr>
<tr>
<td>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</td>
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<tr>
<td>P405 Store locked up.</td>
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<tr>
<td>P501 Dispose of contents/container to an approved waste disposal plant.</td>
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</tbody>
</table>

HMIS Classification

Health hazard: 2
Flammability: 1
Physical hazards: 0
NFPA Rating

Health hazard: 2
Fire: 1
Reactivity Hazard: 0

Potential Health Effects

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:

- Hendecanoic acid
- Acid C-11

Formula: C_{11}H_{22}O_{2}

Molecular Weight: 186.29 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<tr>
<td>112-37-8</td>
<td>203-964-2</td>
<td>-</td>
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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. FIRE-FIGHTING MEASURES

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

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions
Do not let product enter drains.

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

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves.

Eye protection
Safety glasses with side-shields conforming to EN166

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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 Solidified mass or fragments
Colour colourless

Safety data
pH no data available
Melting point 28 - 31 °C (82 - 88 °F) - lit.
Boiling point 228 °C (442 °F) at 213 hPa (160 mmHg) - lit. 248 - 250 °C (478 - 482 °F) - lit.
Flash point 113 °C (235 °F) - closed cup
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Water solubility no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
no data available

Materials to avoid
Bases, Oxidizing agents, Reducing agents

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

11. TOXICOLOGICAL INFORMATION
**Acute toxicity**
LD50 Intravenous - mouse - 140 mg/kg
Remarks: Behavioral: Convulsions or effect on seizure threshold.
LD50 Intravenous - mouse - 140 mg/kg
Remarks: Behavioral: Convulsions or effect on seizure threshold.

**Skin corrosion/irritation**
Skin - rabbit - Mild skin irritation - 24 h

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitization**
no data available

**Germ cell mutagenicity**
no data available

**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

**Specific target organ toxicity - single exposure (GHS)**
Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure (GHS)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**
- **Inhalation**: May be harmful if inhaled. Causes respiratory tract irritation.
- **Ingestion**: May be harmful if swallowed.
- **Skin**: May be harmful if absorbed through skin. Causes skin irritation.
- **Eyes**: Causes eye irritation.

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional Information**
RTECS: YQ2275000

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12. **ECOLOGICAL INFORMATION**

**Toxicity**
no data available

**Persistence and degradability**
no data available

**Bioaccumulative potential**
no data available

**Mobility in soil**
no data available
PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

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

OSHA Hazards
Irritant

DSL Status
All components of this product are on the Canadian DSL list.

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
SARA 313: 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
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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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

Further information
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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 Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.