# Adipic Acid (ADIPC)
## Safety Data Sheet

According to the occupational safety and health (classification, labelling, and safety data sheet of hazardous chemicals) Regulation 2013

Date of issue: 04/04/2017  
Revision date:  
Supersedes:  
Version: 1.0

## SECTION 1: Identification of the hazardous chemical and of the supplier

### 1.1. Product identifier
- **Product form**: Substance
- **Substance name**: Adipic Acid (ADIPC)
- **Chemical name**: Hexanedioic acid
- **Substance type**: Mono-constituent
- **CAS-No.**: 124-04-9
- **Product code**: 014614
- **Formula**: C$_6$H$_{10}$O$_4$
- **Product group**: Raw material

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended use**: Scale and Corrosion Inhibitor

### 1.3. Supplier's details

**Supplier**
Dober Chemical Corp  
543 Forest Road  
18202 Hazle Township, PA - US  
T 630-410-7300 - F 630-410-7444  
regulatory@dober.com - www.dober.com

## SECTION 2: Hazards identification

### 2.1. Classification of the hazardous chemical

**Classification according to Industry Code of Practice on chemicals classification and hazard communication (2014)**
- **Eye Irrit.**: H319
- **STOT SE**: H335
- **STOT RE**: H372

### 2.2. Label elements

**Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2014)**

- **Hazard pictograms (GHS-MY)**: ![](GHS07.png) ![GHS08.png]

- **Signal word (GHS MY)**: Danger
- **Hazard statements (GHS MY)**:  
  - H319 - Causes serious eye irritation
  - H335 - May cause respiratory irritation
  - H372 - Causes damage to organs through prolonged or repeated exposure
- **Precautionary statements (GHS MY)**:  
  - P260 - Do not breathe dust/fume/gas/mist/vapors/spray
  - P264 - Wash hands, forearms and face thoroughly after handling
  - P270 - Do not eat, drink or smoke when using this product
  - P271 - Use only outdoors or in a well-ventilated area
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection
  - P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

### 2.3. Other hazards not contributing to the classification

**Other hazards not contributing to the classification**: Dust may form explosive mixture in air

## SECTION 3: Composition and information of the ingredients of the hazardous chemical

### 3.1. Substances

- **Substance type**: Mono-constituent
- **Name**: Adipic Acid (ADIPC)
- **CAS-No.**: 124-04-9
- **Chemical name**: Hexanedioic acid
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<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to the United Nations GHS (Rev. 4, 2011)</th>
</tr>
</thead>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
First-aid measures after inhalation: Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
No additional information available

5.3. Special protective equipment and precautions for fire-fighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Use special care to avoid static electric charges.
6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: Dust may form flammable and explosive mixture with air.
Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide adequate ventilation to minimize dust and/or vapor concentrations. Avoid dust formation.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep only in the original container in a cool, well-ventilated place. Keep container closed when not in use.
Incompatible products: Strong bases. Strong acids.
Incompatible materials: Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Country</th>
<th>PEL TWA (mg/m³)</th>
<th>ACGIH TWA (mg/m³)</th>
<th>Japan Exposure limits (ACGIH)</th>
<th>Singapore OEL PEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA - ACGIH</td>
<td></td>
<td>5 mg/m³</td>
<td>TWA 5 mg/m³, STEL -</td>
<td></td>
</tr>
</tbody>
</table>

Exposure limit values of other components
No additional information available

8.2. Monitoring
No additional information available

8.3. Appropriate engineering controls
No additional information available

8.4. Personal protective equipment

Hand protection:
Wear protective gloves/protective clothing/eye protection/face protection/protective gloves

Eye protection:
Chemical goggles or safety glasses

Respiratory protection:
Wear appropriate mask

SECTION 9: Physical and chemical properties

Physical state: Solid
Appearance: Powder
Color: White
Odor: Not available
Odor threshold: No data available
pH: 2.7

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Melting point, Freezing point: Melting point: 151 - 154 °C
Boiling point: No data available
Flash point: 196 °C
Auto-ignition temperature: No data available
Flammability (solid, gas): May form combustible dust concentrations in air
Vapor pressure: Vapor pressure: 0.106 mm Hg @ 25°C
Evaporation rate: No data available
Explosion limits: No data available
Explosive properties: No data available
Minimum ignition energy: No data available
Solubility: Water: @ 25C. 2.5
Ethanol: Soluble
Acetone: Soluble
Organic solvent: slightly soluble in benzene
Specific gravity / density: Relative density: 1.34 @ 18C (64F)
Relative density: Relative vapor density at 20 °C: 5.04
Viscosity: Viscosity, dynamic: Not Available
Oxidizing properties: No data available.
VOC content: Not Available

SECTION 10: Stability and reactivity

Chemical stability: Stable under normal conditions
Conditions to avoid: None under recommended storage and handling conditions (see section 7)
Hazardous decomposition products: Fume, Carbon monoxide, Carbon dioxide
Incompatible materials: Oxidizing agent
Possibility of hazardous reactions: Not established

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral): Not classified
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified

Adipic Acid (124-04-9)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 11000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 7940 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 7700 mg/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>LC50 inhalation rat (Dust/Mist - mg/l/4h)</td>
<td>7.7 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
pH: 2.7

Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: May cause respiratory irritation.
STOT-repeated exposure: Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard: Not classified

Potential Adverse human health effects and symptoms: Based on available data, the classification criteria are not met.
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SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Aquatic acute</th>
<th>Aquatic chronic</th>
<th>Other information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified</td>
<td>Not classified</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adipic Acid (124-04-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>EC50 72h algae [mg/l] 1</td>
</tr>
<tr>
<td>Log Pow</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Adipic Acid (ADIPC) (124-04-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Adipic Acid (ADIPC) (124-04-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

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<tr>
<th>Adipic Acid (124-04-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Adipic Acid (ADIPC) (124-04-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility in soil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adipic Acid (124-04-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects

<table>
<thead>
<tr>
<th>Ozone</th>
<th>GWPmix comment</th>
<th>Other adverse effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified</td>
<td>No known effects from this product.</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

SECTION 13: Disposal information

13.1. Disposal methods

<table>
<thead>
<tr>
<th>Product/Packaging disposal recommendations</th>
<th>Ecology - waste materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose in a safe manner in accordance with local/national regulations.</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

SECTION 14: Transportation information

14.1. UN number

<table>
<thead>
<tr>
<th>UN-No. (UN RTDG)</th>
<th>UN-No. (IMDG)</th>
<th>UN-No. (IATA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Regulated</td>
<td>Non Regulated</td>
<td>Non Regulated</td>
</tr>
</tbody>
</table>

14.2. Proper Shipping Name

<table>
<thead>
<tr>
<th>Proper Shipping Name (UN RTDG)</th>
<th>Proper Shipping Name (IMDG)</th>
<th>Proper Shipping Name (IATA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Regulated</td>
<td>Non Regulated</td>
<td>Non Regulated</td>
</tr>
</tbody>
</table>

14.3. Transport hazard class(es)

<table>
<thead>
<tr>
<th>UN RTDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
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14.4. Packing group
Packing group (UN RTDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user
- UN RTDG
No data available
- IMDG
No data available
- IATA
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

14.8. Hazchem or Emergency Action Code
Not applicable

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No additional information available

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information
Version : 1.0
Date of issue : 4/4/2017
Other information : None.

Full text of H-phrases:

| Acute Tox. Classification not possible (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Classification not possible |
| Acute Tox. Not applicable (Inhalation:gas) | Acute toxicity (inhalation:gas) Not applicable |
| Acute Tox. Not classified (Dermal) | Acute toxicity (dermal) Not classified |
| Acute Tox. Not classified (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Not classified |
| Acute Tox. Not classified (Oral) | Acute toxicity (oral) Not classified |
| Aquatic Acute Not classified | Hazardous to the aquatic environment - Acute Hazard Not classified |
| Aquatic Chronic Not classified | Hazardous to the aquatic environment - Chronic Hazard Not classified |
| Asp. Tox. Classification not possible | Aspiration hazard Classification not possible |
| Carc. Classification not possible | Carcinogenicity Classification not possible |
| Expl. Not applicable | Explosive Not applicable |
| Eye Irrit. 2 | Serious eye damage/eye irritation Category 2 |
| Flam. Aerosol Not applicable | Flammable aerosol Not applicable |
| Flam. Gas Not applicable | Flammable gases Not applicable |
| Flam. Liq. Not applicable | Flammable liquids Not applicable |
| Flam. Sol. Classification not possible | Flammable solids Classification not possible |
| Met. Corr. Classification not possible | Corrosive to metals Classification not possible |
| Muta. Not classified | Germ cell mutagenicity Not classified |
| Org. Perox. Not applicable | Organic peroxide Not applicable |
| Ox. Gas Not applicable | Oxidising gases Not applicable |
| Ox. Liq. Not applicable | Oxidising liquids Not applicable |
| Ox. Sol. Not applicable | Oxidising solids Not applicable |

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<table>
<thead>
<tr>
<th>Property</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press. Gas</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pyr. Liq.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pyr. Sol.</td>
<td>Not classified</td>
</tr>
<tr>
<td>Repr. Classification</td>
<td>Not possible</td>
</tr>
<tr>
<td>Resp. Sens. Classification</td>
<td>Not possible</td>
</tr>
<tr>
<td>Self-heat. Classification</td>
<td>Not possible</td>
</tr>
<tr>
<td>Self-react. Classification</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Skin Sens.</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity (repeated exposure) Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>Water-react.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
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SDS Malaysia - Dober

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.