Bis(2-Ethylhexyl) Adipate  
CAS No 103-23-1

MATERIAL SAFETY DATA SHEET  
SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers  
Product name : Bis(2-Ethylhexyl) Adipate  
CAS-No. : 103-23-1

1.2 Relevant identified uses of the substance or mixture and uses advised against  
Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet  
Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi-10002  
INDIA  
Telephone : +91 11 49404040  
Email : care@cdhfinechemical.com

1.4 Emergency telephone number  
Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture  
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements  
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances  
Synonyms : Adipic acid di(2-ethylhexyl) ester  
DOA  
Formula : C22H42O4  
Molecular weight : 370.57 g/mol  
CAS-No. : 103-23-1  
EC-No. : 203-090-1

No components need to be disclosed according to the applicable regulations.
SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

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.

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

SECTION 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

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

5.4 Further information
No data available

SECTION 6: Accidental release measures

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

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Combustible liquids not in Storage Class 3

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls
General industrial hygiene practice.

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.

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.

Respiratory protection
Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid
   Colour: colourless

b) Odour
   No data available

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point/range: < -70 °C - lit.

f) Initial boiling point and boiling range
   175 °C at 3 hPa - lit.

g) Flash point
   196 °C - closed cup

h) Evaporation rate
   No data available

i) Flammability (solid, gas)
   No data available

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
   0.925 g/cm3 at 20 °C

n) Water solubility
   0.00078 g/l at 22 °C - slightly soluble

o) Partition coefficient: n-octanol/water
   log Pow: 8.94 at 25 °C
9.2 Other safety information
No data available

SECTION 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
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - female - 24,600 mg/kg(Bis(2-ethylhexyl) adipate)
(OECD Test Guideline 401)
LD50 Oral - Rat - male - 45,000 mg/kg(Bis(2-ethylhexyl) adipate)
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - > 5.7 mg/l(Bis(2-ethylhexyl) adipate)
(OECD Test Guideline 403)
LD50 Dermal - Rabbit - 14,800 mg/kg(Bis(2-ethylhexyl) adipate)

Skin corrosion/irritation
No data available(Bis(2-ethylhexyl) adipate)

Serious eye damage/eye irritation
No data available(Bis(2-ethylhexyl) adipate)

Respiratory or skin sensitisation
No data available(Bis(2-ethylhexyl) adipate)

Germ cell mutagenicity

Ames test(Bis(2-ethylhexyl) adipate)
S. typhimurium
Result: negative
(Bis(2-ethylhexyl) adipate)
Mouse - male
Result: negative
Carcinogenicity
This product is or contains a component that is not classifiable as to its classification. (Bis(2-ethylhexyl) adipate) (Bis(2-ethylhexyl) adipate)
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Bis(2-ethylhexyl) adipate)

Reproductive toxicity
No data available (Bis(2-ethylhexyl) adipate)

Specific target organ toxicity - single exposure
No data available (Bis(2-ethylhexyl) adipate)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available (Bis(2-ethylhexyl) adipate)

Additional Information
Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 200 mg/kg (Bis(2-ethylhexyl) adipate)
RTECS: Not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Bis(2-ethylhexyl) adipate)

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
static test LC0 - Oncorhynchus mykiss (rainbow trout) - > 0.78 mg/l - 96 h (Bis(2-ethylhexyl) adipate)

Toxicity to daphnia and other aquatic invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h (Bis(2-ethylhexyl) adipate)
(OECD Test Guideline 202)

Toxicity to algae
static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - > 500 mg/l - 72 h (Bis(2-ethylhexyl) adipate)

Toxicity to bacteria
EC50 - Sludge Treatment - > 350 mg/l - 3 h (Bis(2-ethylhexyl) adipate)

12.2 Persistence and degradability
Biodegradability
aerobic - Exposure time 28 d (Bis(2-ethylhexyl) adipate)
Result: 90 - 100 % - Readily biodegradable
(OECD Test Guideline 301F)

12.3 Bioaccumulative potential
Bioaccumulation
Lepomis macrochirus - 28 d
- 250 µg/l (Bis(2-ethylhexyl) adipate)
Bioconcentration factor (BCF): 27

12.4 Mobility in soil
No data available (Bis(2-ethylhexyl) adipate)

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
No data available
SECTION 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.

SECTION 14: Transport information

14.1 UN number

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not dangerous goods</td>
<td>Not dangerous goods</td>
<td>Not dangerous goods</td>
</tr>
</tbody>
</table>

14.3 Transport hazard class(es)

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

14.4 Packaging group

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG:</th>
<th>IATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

14.5 Environmental hazards

<table>
<thead>
<tr>
<th>ADR/RID:</th>
<th>IMDG Marine pollutant:</th>
<th>IATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Further information

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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.