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

1.1 Product identifiers
Product name: 2,3-Dibromo-1-propanol

Product Number: EX-000089
Brand: Exir
Index-No.: 602-088-00-1
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No.: 96-13-9

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
Firma: Exir GmbH
Flotowgasse 18-22/2/1
1190 WIEN
AUSTRIA
Telefon: +43 (0) 19463937
Fax: +43 (0) 19462797
Email-Adresse: info@exir.co.at

1.4 Emergency telephone number
Emergency Phone #: +43 (0) 14064343

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Carcinogenicity (Category 1B), H350
Reproductive toxicity (Category 2), H361
Acute toxicity, Dermal (Category 3), H311
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Oral (Category 4), H302
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
R45
R62
T	Toxic	R24
Xn	Harmful	R20/22
R52/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger

Hazard statement(s)
- H302: Harmful if swallowed.
- H311: Toxic in contact with skin.
- H332: Harmful if inhaled.
- H350: May cause cancer.
- H361: Suspected of damaging fertility or the unborn child.
- H412: Harmful to aquatic life with long lasting effects.

Precautionary statement(s)
- P201: Obtain special instructions before use.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/ protective clothing.
- P308 + P313: IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements
- none

Restricted to professional users.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,3-Dibromo-1-propanol</td>
<td>Acute Tox. 4; Acute Tox. 3; Carc. 1B; Repr. 2; Aquatic Chronic 3; H302 + H332, H311, H350, H361, H412</td>
<td>-</td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,3-Dibromo-1-propanol</td>
<td>T, Carc.Cat.2, Repr.Cat.3, R45 - R20/22 - R24 - R52/53 - R62</td>
<td>-</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 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. Take victim immediately to hospital. 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.

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, Hydrogen bromide gas.

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available.

SECTION 6: Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. 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
Soak up with inert absorbent material and dispose of as hazardous waste. 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
Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Face shield and safety glasses 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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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).

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>a) Appearance</th>
<th>Form: clear, viscous liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Colour: light yellow</td>
</tr>
<tr>
<td>b) Odour</td>
<td>no data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>no data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>95 - 97 °C at 13 hPa - lit.</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>112 °C</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>no data available</td>
</tr>
</tbody>
</table>
k) Vapour pressure no data available
l) Vapour density no data available
m) Relative density 2.12 g/cm³ at 25 °C
n) Water solubility no data available
o) Partition coefficient: n-octanol/water no data available
p) Auto-ignition temperature no data available
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
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
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 - 681 mg/kg
LC₅₀ Inhalation - rat - 4 h - 9.920 mg/m³
LD₅₀ Dermal - rabbit - 316 mg/kg
LD₅₀ Intraperitoneal - mouse - 125 mg/kg

Skin corrosion/irritation

Serious eye damage/eye irritation
Eyes - rabbit

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available
Carcinogenicity
Possible human carcinogen

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,3-Dibromo-1-propanol)

Reproductive toxicity
Suspected human reproductive toxicant

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Additional Information
RTECS: UB0175000

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 71 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 338 mg/l - 48 h

12.2 Persistence and degradability
no data available

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
Harmful to aquatic life with long lasting effects.

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
ADR/RID: 2810  IMDG: 2810  IATA: 2810

14.2 UN proper shipping name
ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S. (2,3-Dibromo-1-propanol)
IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (2,3-Dibromo-1-propanol)
IATA: Toxic liquid, organic, n.o.s. (2,3-Dibromo-1-propanol)

14.3 Transport hazard class(es)
ADR/RID: 6.1  IMDG: 6.1  IATA: 6.1
14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
ADR/RID: no  IMDG Marine Pollutant: no  IATA: no

14.6 Special precautions for user
no data available

SECTION 15: Regulatory information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information
Full text of H-statements referred to under sections 2 and 3.
Acute Tox.  Acute toxicity
Aquatic Chronic  Chronic aquatic toxicity
Carc.  Carcinogenicity
H302  Harmful if swallowed.
H302 + H332  Harmful if swallowed or if inhaled
H311  Toxic in contact with skin.
H332  Harmful if inhaled.
H350  May cause cancer.
H361  Suspected of damaging fertility or the unborn child.

Full text of R-phrases referred to under sections 2 and 3
T  Toxic
R20/22  Harmful by inhalation and if swallowed.
R24  Toxic in contact with skin.
R45  May cause cancer.
R52/53  Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62  Possible risk of impaired fertility.
Repr.Cat.3  Toxic to Reproduction Category 3

Further information
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