1. PRODUCT AND COMPANY IDENTIFICATION

Product Name 1-Bromohexane
Cat No. AC107040000; AC107040025; AC107040050; AC107045000
Synonyms n-Hexyl bromide
Recommended Use Laboratory chemicals

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

2. HAZARDS IDENTIFICATION

WARNING!
Emergency Overview
Flammable liquid and vapor. Causes eye, skin, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Appearance Colorless
Physical State Liquid
Odor odorless

Target Organs Respiratory system, Eyes, Skin
Potential Health Effects
Acute Effects
Principle Routes of Exposure
Eyes
Irritating to eyes.

Skin
Irritating to skin. May be harmful in contact with skin.

Inhalation
Irritating to respiratory system. May be harmful if inhaled.

Ingestion
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Chronic Effects
None known.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Bromohexane</td>
<td>111-25-1</td>
<td>99</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

**Inhalation**
Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

**Ingestion**
Do not induce vomiting. Obtain medical attention.

**Notes to Physician**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point**
57°C / 134.6°F

**Method**
No information available.

**Autoignition Temperature**
No information available.

**Explosion Limits**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**Suitable Extinguishing Media**
CO₂, dry chemical, dry sand, alcohol-resistant foam. Use water spray to cool unopened containers.

**Unsuitable Extinguishing Media**
Do not use a solid water stream as it may scatter and spread fire.

**Hazardous Combustion Products**
No information available.

<table>
<thead>
<tr>
<th>Sensitivity to mechanical impact</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to static discharge</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

**Specific Hazards Arising from the Chemical**
Flammable. Risk of ignition. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Remove all sources of ignition. Use personal protective equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Wear personal protective equipment. Ensure adequate ventilation. Use explosion-proof equipment. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist.

Storage
Keep away from heat and sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/face Protection</td>
<td>Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Wear appropriate protective gloves and clothing to prevent skin exposure</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt; 10 mmHg @ 20 °C</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Density</td>
<td>5.7</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>154 - 158°C / 309.2 - 316.4°F @ 760 mmHg</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-85°C / -121°F</td>
</tr>
<tr>
<td>Decomposition temperature °C</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>57°C / 134.6°F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.170</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available.</td>
</tr>
<tr>
<td>log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>165.07</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C6 H13 Br</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability                          Stable under normal conditions.
Conditions to Avoid               Incompatible products. Heat, flames and sparks.
Incompatible Materials            Strong oxidizing agents, Bases
Hazardous Decomposition Products  Carbon monoxide (CO), Carbon dioxide (CO2)
Hazardous Polymerization          Hazardous polymerization does not occur
Hazardous Reactions               None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Component Information</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Bromohexane</td>
<td>3300 mg/kg (Rat)</td>
<td>Not listed</td>
<td>550 g/m³ (Rat) 30 min</td>
</tr>
</tbody>
</table>

Irritation                      Irritating to eyes, respiratory system and skin
Toxicologically Synergistic     No information available.
Products                         

Chronic Toxicity

Carcinogenicity                 There are no known carcinogenic chemicals in this product

Sensitization                   No information available.
Mutagenic Effects               No information available.
Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

Other Adverse Effects
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Endocrine Disruptor Information
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Persistence and Degradability
No information available

Bioaccumulation/ Accumulation
No information available

Mobility
No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

UN-No
UN1993

Proper Shipping Name
FLAMMABLE LIQUID, N.O.S.

Proper technical name
(1-BROMOHEXANE)

Hazard Class
3

Packing Group
III

TDG

UN-No
UN1993

Proper Shipping Name
FLAMMABLE LIQUID, N.O.S.

Hazard Class
3

Packing Group
III

IATA

UN-No
UN1993

Proper Shipping Name
FLAMMABLE LIQUID, N.O.S.

Hazard Class
3
14. TRANSPORT INFORMATION

Packing Group

III

IMDG/IMO

UN-No
UN1993

Proper Shipping Name
FLAMMABLE LIQUID, N.O.S.

Hazard Class
3

Packing Group
III

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Bromohexane</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>203-850-2</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Legend:

X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313
Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard Yes
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act
Not applicable

Clean Air Act
Not applicable
OSHA
Not applicable

CERCLA
Not Applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know
Not applicable

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade
Moderate risk, Grade 2

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
B3  Combustible liquid
D2B  Toxic materials

16. OTHER INFORMATION

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Tel: (412) 490-8929

Creation Date
16-Oct-2009

Print Date
16-Oct-2009
Revision Summary

"***", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS