1. PRODUCT AND COMPANY IDENTIFICATION

Product Name 2-Bromopropane
Cat No. : AC107320000; AC107320010; AC107320025; AC107320100; AC107322500
Synonyms Isopropyl 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

3. HAZARDS IDENTIFICATION

DANGER!
Emergency Telephone Number
For information US call: 001-800-ACROS-01 /
Europe call: +32 14 57 52 11
Emergency Number US:001-201-796-7100 /
Europe: +32 14 57 52 99
CHEMTREC Tel. No.US:001-800-424-9300 /
Europe:001-703-527-3887

Emergency Overview
Flammable liquid and vapor. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. Possible cancer hazard. May cause cancer based on animal data. May impair fertility. WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorless, Light brown</td>
<td>Liquid</td>
<td>odorless</td>
</tr>
</tbody>
</table>

Target Organs Eyes, Skin, Respiratory system, Central nervous system (CNS), Reproductive System, Blood, Liver

Potential Health Effects

Acute Effects

Principle Routes of Exposure

<table>
<thead>
<tr>
<th>Eyes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td></td>
</tr>
</tbody>
</table>

Irritating to eyes.
Irritating to skin. Harmful by skin absorption. Repeated exposure may cause skin dryness or cracking.
Inhalation  Irritating to respiratory system. Harmful by inhalation. Inhalation may cause central nervous system effects.

Ingestion  Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects  Repeated or prolonged exposure may cause central nervous system damage. Possible cancer hazard based on tests with laboratory animals. Repeated exposure may cause skin dryness or cracking. May impair fertility.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions  Skin disorders. Respiratory disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Bromopropane</td>
<td>75-26-3</td>
<td>&gt;95</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. Immediate medical attention is required.

Inhalation  Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion  Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician  Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point  1°C / 33.8°F

   Method -  No information available.

Autoignition Temperature  No information available.

Explosion Limits  No data available

   Upper  4.6 vol %

   Lower  

Suitable Extinguishing Media  Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Unsuitable Extinguishing Media  No information available.

Hazardous Combustion Products  No information available.

   Sensitivity to mechanical impact  No information available.

   Sensitivity to static discharge  No information available.

Specific Hazards Arising from the Chemical  Flammable. 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.

NFPA  Health  2  Flammability  3  Instability  0  Physical hazards  N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Handling
Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Do not breathe vapors/dust. Do not ingest. Take precautionary measures against static discharges.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures
Use only under a chemical fume hood. 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.

Personal Protective Equipment
Eye/face Protection
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.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State
Liquid

Appearance
Colorless, Light brown

Odor
odorless

Odor Threshold
No information available.

pH
No information available.

Vapor Pressure
224 mbar @ 20 °C

Vapor Density
No information available.

Viscosity
No information available.

Boiling Point/Range
59°C / 138.2°F@ 760 mmHg

Melting Point/Range
-89°C / -128.2°F

Decomposition temperature
251 °C
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>1°C / 33.8°F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.310</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>122.99</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C3 H7 Br</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Stability</th>
<th>Stable under normal conditions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid</td>
<td>Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong oxidizing agents, Strong bases</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide (CO), Carbon dioxide (CO₂)</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Acute Toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Information</td>
<td>No acute toxicity information is available for this product</td>
</tr>
<tr>
<td>Component Information</td>
<td></td>
</tr>
<tr>
<td>Irritation</td>
<td>Irritating to eyes, respiratory system and skin</td>
</tr>
<tr>
<td>Toxicologically Synergistic Products</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chronic Toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
<td>Possible cancer hazard. May cause cancer based on animal data.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No information available.</td>
</tr>
<tr>
<td>Mutagenic Effects</td>
<td>No information available.</td>
</tr>
<tr>
<td>Reproductive Effects</td>
<td>Experiments have shown reproductive toxicity effects on laboratory animals. May impair fertility.</td>
</tr>
<tr>
<td>Developmental Effects</td>
<td>Component substance is listed on California Proposition 65 as a developmental hazard.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Other Adverse Effects</td>
<td>See actual entry in RTECS for complete information.</td>
</tr>
<tr>
<td>Endocrine Disruptor Information</td>
<td>No information available</td>
</tr>
</tbody>
</table>
12. ECOLOGICAL INFORMATION

Ecotoxicity
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Bromopropane</td>
<td>Not listed</td>
<td>LC50 24h 150 mg/L (goldfish)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Persistence and Degradability
No information available

Bioaccumulation/ Accumulation
No information available

Mobility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Bromopropane</td>
<td>1.9</td>
</tr>
</tbody>
</table>

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 UN2344
Proper Shipping Name BROMOPROPANES
Proper technical name (2-Bromopropane)
Hazard Class 3
Packing Group II

TDG
UN-No UN2344
Proper Shipping Name BROMOPROPANES
Hazard Class 3
Packing Group II

IATA
UN-No 2344
Proper Shipping Name BROMOPROPANES
Hazard Class 3
Packing Group II

IMDG/IMO
UN-No 2344
Proper Shipping Name BROMOPROPANES
Hazard Class 3
Packing Group II
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>2-Bromopropane</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>200-855-1</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</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: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

Clean Water Act  Not applicable

Clean Air Act  Not applicable

OSHA  Occupational Safety and Health Administration  Not applicable

CERCLA  Not Applicable

California Proposition 65
This product contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Bromopropane</td>
<td>75-26-3</td>
<td>Female Reproductive</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male Reproductive</td>
<td></td>
</tr>
</tbody>
</table>

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
Serious risk, Grade 3

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
B2 Flammable liquid
D2A Very toxic materials
D2B Toxic materials

16. OTHER INFORMATION

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date
16-Sep-2010

Print Date
08-Aug-2013

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