

DATE: 03/30/98

ACCT: 742982001

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CAT NO: AC106772500 PO NBR: N/A

**** MATERIAL SAFETY DATA SHEET ****

1-Bromobutane, 99%
96286

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: 1-Bromobutane, 99%

Catalog Numbers:
AC106770000, AC106770010, AC106772500

Synonyms:

1-Bromobutane.

Company Identification: Acros Organics N.V.

One Reagent Lane

Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
100-65-9	BUTYL BROMIDE	99%	203-801-9
Hazard Symbols: XI			
Risk Phrases: 10 37			

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: clear very light yellow. Flash Point: 13 deg C.
Warning! Flammable liquid. The toxicological properties of this material have not been fully investigated. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.
Target Organs: None.

Potential Health Effects

Eye:

May cause eye irritation. May cause conjunctivitis.

Skin:

Causes skin irritation.

Ingestion:

May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation:

May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic:

No information found.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin:

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

No specific antidote exists.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint.

Extinguishing Media:

For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

Autoignition Temperature: 265 deg C (509.00 deg F)

Flash Point: 13 deg C (55.40 deg F)

NFPA Rating: health-2; flammability-3; reactivity-0

Explosion Limits: Lower: 2.60 vol %

Upper: 6.60 vol %

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**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Wear a self contained breathing apparatus and appropriate Personal protection. (See Exposure Controls, Personal Protection section).
Scoop up with a nonsparking tool, then place into a suitable container for disposal. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with skin and eyes. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid ingestion and inhalation. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
BUTYL BROMIDE	none listed	none listed	none listed

OSHA Vacated PELs:

BUTYL BROMIDE:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:	Liquid
Appearance:	clear very light yellow
Odor:	None reported.
pH:	Not available.
Vapor Pressure:	40 mm Hg @ 25 C
Vapor Density:	4.7 (air=1)
Evaporation Rate:	Not available.
Viscosity:	Not available.
Boiling Point:	100.0 - 104.0 deg C @ 760.0mm Hg
Freezing/Melting Point:	- 112.00 - 0.00 deg
Decomposition Temperature:	Not available.
Solubility:	0.608 G/L WATER (30&C)
Specific Gravity/Density:	1.2760g/cm3
Molecular Formula:	C4H9Br
Molecular Weight:	137.02

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, Ignition sources.

Incompatibilities with Other Materials:

Strong oxidizing agents, strong bases, magnesium, sodium, potassium.

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Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide, hydrogen bromide.
Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTCS#:
CAS# 109-65-9: EJ6225000
LD50/LC50:
Not available.
Carcinogenicity:
BUTYL BROMIDE -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No information available.
Teratogenicity:
No information available.
Reproductive Effects:
No information available.
Neurotoxicity:
No information available.
Mutagenicity:
No information available.
Other Studies:
None.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
No information available.
Environmental Fate:
No information reported.
Physical/Chemical:
No information available.
Other:
None.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants:
None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None listed.
RCRA F-Series: None listed.
RCRA P-Series: None listed.
RCRA U-Series: None listed.
Not listed as a material banned from land disposal according to RCRA.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
Shipping Name: N-BUTYL BROMIDE
Hazard Class: 3
UN Number: UN1126
Packing Group: II
IMO
Shipping Name: N-BUTYL BROMIDE
Hazard Class: 3.2
UN Number: 1126
Packing Group: II
IATA
Shipping Name: 1-BROMOBUTANE
Hazard Class: 3
UN Number: 1126
Packing Group: II
RID/ADR
Shipping Name: 1-BROMOBUTANE
Dangerous Goods Code: 3(3B)
UN Number: 1126
Canadian TDG
No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
CAS# 109-65-9 is listed on the TSCA Inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
Section 302 (RQ)

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None of the chemicals in this material have an RQ.
Section 302 (TPQ)
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 109-65-9: acute, flammable.

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

BUTYL BROMIDE can be found on the following state right to know lists: New Jersey, Florida, Pennsylvania, Massachusetts.
California No Significant Risk Level:
None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Risk Phrases:

R 10 Flammable.

R 37 Irritating to respiratory system.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 23 Do not inhale gas/fumes/vapour/spray.

WGK (Water Danger/Protection)

CAS# 109-65-9: 2

Canada

CAS# 109-65-9 is listed on Canada's DSL/NDL List.

WHMIS: Not available.

CAS# 109-65-9 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 109-65-9: OEL-RUSSIA:STEL 0.3 mg/m3;Skin

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 2/01/1996 Revision #1 Date: 9/02/1997

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.