Material Safety Data Sheet
Bromochloromethane, 98%

ACC# 49355

Section 1 - Chemical Product and Company Identification

MSDS Name: Bromochloromethane, 98%
Catalog Numbers: AC159130000, AC159130010, AC159130050, AC159132500
Synonyms: Chlorobromomethane; Methylene chlorobromide; Mono-chloro-mono-bromo-methane; Methane, bromochloro-; Chloromethyl bromide
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, 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	Percent	EINECS/ELINCS
74-97-5	Bromochloromethane	98	200-826-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless clear liquid.
Warning! Causes eye and skin irritation. Causes digestive and respiratory tract irritation. May cause central nervous system depression. May cause liver and kidney damage. Light sensitive.
Target Organs: Kidneys, central nervous system, liver, respiratory system, eyes, skin.

Potential Health Effects
Eye: Causes eye irritation. May cause eye injury.
Skin: Causes skin irritation. May cause dermatitis.
Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause central nervous system depression.
Inhalation: Causes respiratory tract irritation. May cause chemical bronchitis with coughing and difficulty in breathing. Vapors may cause dizziness or suffocation.
Chronic: May cause liver and kidney damage. Prolonged exposure may produce a narcotic effect. Laboratory experiments have resulted in mutagenic effects.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

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. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Material will not burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.
Flash Point: 400 deg C (752.00 deg F)
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Store protected from light. Not compatible with some forms of plastics and coatings.
Storage: Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Bromochloromethane	200 ppm TWA	200 ppm TWA; 1050 mg/m3 TWA 2000 ppm IDLH	200 ppm TWA; 1050 mg/m3 TWA

OSHA Vacated PELs: Bromochloromethane: 200 ppm TWA; 1050 mg/m3 TWA
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 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Appearance: clear, colorless
Odor: Sweet chloroform-like odor.
pH: Not available.
Vapor Pressure: 117 mm Hg @ 20 C
Vapor Density: 4.46
Evaporation Rate: Not available.
Viscosity: 0.667 cP 25 deg C
Boiling Point: 68 deg C @ 760.00mm Hg
Freezing/Melting Point:-88 deg C
Decomposition Temperature:400 deg C
Solubility: Insoluble.
Specific Gravity/Density:1.9910g/cm3
Molecular Formula:CH2BrCl
Molecular Weight:129.38

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. May discolor on exposure to light. Light sensitive.
Conditions to Avoid: Incompatible materials, light, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, magnesium, zinc, calcium, powdered aluminum.
Hazardous Decomposition Products: Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide, hydrogen bromide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 74-97-5: PA5250000
LD50/LC50:
CAS# 74-97-5:
Inhalation, mouse: LC50 = 12030 mg/m3/7H;
Oral, mouse: LD50 = 4300 mg/kg;
Oral, rat: LD50 = 5 gm/kg;
Skin, rabbit: LD50 = >20 gm/kg;
.

Carcinogenicity:
CAS# 74-97-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: Mutation in Microorganisms: Salmonella typhimurium = 10 mg/plate.Mutation in Microorganisms: Salmonella typhimurium = 10 ug/plate.Cytogenetic analysis: Hamster lung = 1 umol/L.Sister Chromatid Exchange: Hamster lung = 5 umol/L.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Estimated BCF values = 3 and 7. These values suggest that bioconcentration in fish and aquatic organisms will not occur to any significant extent. Estimated Koc values = 21 and 139. Leaching may occur.
Environmental: Bromochloromethane will display high to very high mobility in soil. Direct photochemical degradation in the atmosphere or water is unlikely.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	BROMOCHLOROMETHANE	BROMOCHLOROMETHANE
Hazard Class:	6.1	6.1
UN Number:	UN1887	UN1887
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 74-97-5 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 74-97-5: Effective 6/1/87, Sunset 12/19/95
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.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 74-97-5: immediate, delayed.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants. CAS# 74-97-5 is listed as a Class 1 ozone depletor with an 0.12 ODP
This material does not contain any Class 2 Ozone depletors.
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
CAS# 74-97-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

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 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 74-97-5: 2

Canada - DSL/NDSL

CAS# 74-97-5 is listed on Canada's DSL List.

Canada - WHMIS

not available.

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

Canadian Ingredient Disclosure List

CAS# 74-97-5 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 2/18/1999
Revision #4 Date: 10/03/2005