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THE POWER OF THREE³

PHARMCO-AAPER

AND COMMERCIAL ALCOHOLS

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

Manufacturer: PHARMCO-AAPER
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Bromochloromethane

1. CHEMICAL PRODUCT IDENTIFICATION

Product Name: Bromochloromethane
Synonyms: Chlorobromomethane
Molecular Formula: BrCH_2Cl
Molecular Weight: 129.39

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	Chemical Name	Percent
74-97-5	Bromochloromethane	98%

3. HAZARDS IDENTIFICATION

CAUTION! LIGHT SENSITIVE. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE LIVER AND KIDNEY DAMAGE. CAUSES EYE AND SKIN IRRITATION. CAUSES DIGESTIVE AND RESPIRATORY TRACT IRRITATION. MAY CAUSE CANCER IN HUMANS.

Potential Health Effects

NFPA Hazard Ratings: Health - 2, Flammability - 0, Reactivity - 0

NOTE: NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Eye: Causes eye irritation.

Skin: Causes skin irritation. May cause dermatitis.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May be harmful if swallowed.

Inhalation: Causes respiratory tract irritation. May cause chemical bronchitis with coughing and difficulty in breathing.

Chronic: May cause liver and kidney damage.

Target Organs: Kidneys, liver.

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.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do NOT induce vomiting. 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 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.

5. FIRE FIGHTING MEASURES

Autoignition Temperature: Not available.

Flash Point: 400 deg C (752.00 deg F)

General Information: Material will not burn.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

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., dry sand or earth), then place into a chemical waste container. Clean up spills immediately, observing precautions in the Protective Equipment section.

7. HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin and eyes. Do not breathe dust, vapor, mist, or gas. Do not get on skin or in eyes. Do not ingest or inhale.

Storage: Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

Exposure Limits:

ACGIH: 200 ppm 1060 mg/m

NIOSH: 3200 ppm TWA; 1050 mg/m³ TWA

OSHA - Final PELs: 2000 ppm

IDLH: 200 ppm TWA; 1050 mg/m³ TWA

OSHA Vacated PELs: Bromochloromethane, 98%: 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: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Not available.

Odor: Sweet chloroform-like odor.

pH: Not available.

Vapor Pressure: 117 mm Hg @ 20 C

Vapor Density: 4.46

Evaporation Rate:

Viscosity: 0.667 cP 25 de

Boiling Point: 68760.00 deg C

Freezing/Melting Point:-88 deg C

Decomposition Temperature:400 deg C

Solubility: miscible with most common organic solven

Specific Gravity/Density:1.9910g/cm³

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, light.

Incompatibilities with Other Materials: Strong bases, strong oxidizing agents, metals.

Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide, hydrogen bromide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

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, NIOSH, NTP, or OSHA.

Mutagenicity: cytogenetic analysis - hamster - lung: 1 fmol/L sister chromatid exchange - hamster - lung: 5 fmol/L

12. ECOLOGICAL INFORMATION

Ecotoxicity: Accumulation in fish and aquatic organisms will not occur to any significant extent. log Pow: 1.41

Environmental Fate: Bromochloromethane will display high to very high mobility in soil. Direct photochemical degradation in the atmosphere or water is unlikely.

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.

14. TRANSPORT INFORMATION

US DOT, IATA, IMO

Shipping Name: BROMOCHLOROMETHANE

Hazard Class: 6.1

UN Number: UN1887

Packing Group: III

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 Date: June 1, 1987; Sunset Date: December 19, 1995

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)

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 # 74-97-5: acute, chronic.

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 depletors. 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, Florida, Pennsylvania, Minnesota, 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 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

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

This product does not have a WHMIS classification.

CAS# 74-97-5 is not listed on Canada's Ingredient Disclosure List.

16. OTHER INFORMATION

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of

information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.