

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: BCP Phase Separation Reagent
Cat. No: BP 151

Molecular Research Center, Inc.
5645 Montgomery Rd.
Cincinnati, Ohio 45212
USA 1-888-841-0090

Product Name: BCP Phase Separation Reagent
Chemical Formula: C₃H₆BrCl
Molecular Weight: 157.44

Synonyms: trimethylene bromochloride; 3-bromopropyl chloride; omega-chlorobromopropane; 1-chloro-3-bromopropane (DOT); 3-chloropropyl bromide.

NFPA RATINGS: Health=2 Fire=2 Reactivity=0
HMIS RATINGS: (scale 0-4) Health=2 Fire=2 Reactivity=1 PPE=H

CHEMTREC EMERGENCY NUMBER: Only in the event of an emergency involving a spill, leak, fire exposure or accident. USA: 1-800-424-9300; International: 1-703-527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Percent
1-Bromo-3-Chloropropane	109-70-6	100%
	EINECS No.	
	203-697-1	

3. HAZARD IDENTIFICATION

OSHA HAZARD: Combustible liquid, harmful if ingested.

ROUTES OF EXPOSURE:

Skin	Yes
Ingestion	Yes
Inhalation	Yes

ACUTE EFFECTS: Harmful if inhaled or swallowed. Chemical permeator causing eye and skin irritation. Material is irritating to mucous membranes and upper respiratory tract and can result in dizziness and headache. Ingestion may cause gastrointestinal irritation with nausea, vomiting and diarrhea with potential liver and kidney damage.

4. FIRST AID

EYE CONTACT: Check for and remove any contact lenses. Flush eyes with water for 15 min., holding eyelids open. Obtain medical attention.

SKIN CONTACT: Flush skin with soap and water for 15 min. Remove contaminated clothing and thoroughly wash before reuse. Cover the irritated skin with an emollient.

INHALATION: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Obtain medical attention.

INGESTION: If swallowed, wash mouth out if person is conscious. Do not induce vomiting unless directed so by medical personnel. Obtain medical attention. Loosen tight clothing such as a collar, tie belt or waistband.

5. FIRE FIGHTING MEASURES

FLASH POINTS: Closed cup 45C (113F)

FIRE HAZARDS: Combustible in the presence of an open flame and sparks.

EXTINGUISHING MEDIA: May be combustible at high temperatures. Extinguishing media appropriate to surrounding fire conditions. Small Fire: Use dry chemical powder. Large Fire: Use water spray, fog or foam. Do not use water jet. Emits toxic fumes under fire conditions (chloride, bromide).

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT FOR SPILL CONDITIONS: Note that accidental releases may be subject to special reporting requirements and other regulatory mandates. Check and comply with local laws and regulations. Use gloves and other appropriate protective covering to avoid skin contact. Ensure adequate ventilation. Use goggles, face shield or other eye protection. Contain spill with an inert adsorbent such as vermiculite, sand or earth. Place spill material in a suitable container and hold for disposal. Wash spill site after pickup is complete. Avoid breathing vapor, mist or gas.

7. HANDLING AND STORAGE

Store in a cool, dry place in sealed containers. Ensure good ventilation at the workplace. Practice good laboratory techniques when handling this substance. After using the chemical, wash hands thoroughly. Use adequate ventilation and avoid breathing vapor, mist or gas. Empty containers pose a fire risk and any residue should be evaporated under a fume hood. Keep away from incompatibles such as oxidizing agents, metals and alkalis.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

For routine operations wear safety glasses, latex gloves and a chemical apron to avoid contact with eyes, skin and clothing. Facilities utilizing this chemical should be equipped with an eyewash station and safety shower. Use adequate ventilation to keep airborne concentrations below the permissible exposure limits. (No PELs are listed for this chemical). Wash contaminated clothing before reuse. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colorless liquid.
Odor:	Chloroform-like, sweetish odor.
Molecular Weight:	157.44
PH:	N/A
Refractive Index:	1.486
Vapor Pressure:	6.6 mbar @ 20 C
Density:	1.5920 at 25 C (77 F)
Boiling point:	144 -145 C (291-295 F)
Melting point:	- 59 C
Flash point:	Closed Cup 45 C (113 F)
Solubility in water:	Insoluble
Specific gravity:	1.592 (water=1)
Solubility:	Insoluble in cold water, hot water.
Partition coefficient:	log Kow: 2.2 n-octanol/water

10. STABILITY AND REACTIVITY

Stable under normal temperatures and pressures.

INCOMPATIBILITIES: Heat, sparks, ignition sources, strong bases, strong oxidizing agents, magnesium, zinc, aluminum.

DECOMBUSTION PRODUCTS: Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide, and hydrogen bromide gas.

11. TOXICOLOGICAL INFORMATION

RTECS# TX4113000 DOT: POISON B, 6.1, III

Rat: Inhalation: LC50=5668 mg/m³; oral LD50=930 mg/kg; Mouse: oral LD50=1290 mg/kg. LCLo/2H: 7270 mg/m³.

CARCINOGENICITY: Not listed by ACGIH, NIOSH, NTP OR OSHA. TARGET ORGAN DATA.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Harmful to fish; LC50 (24 hr) goldfish 75 mg/l- 24 h.

Possibly hazardous short-term degradation products are not likely; however, long-term degradation products are possible. The products of degradation are as toxic as the product itself.

13. DISPOSAL CONSIDERATIONS

Keep in sealed containers until final disposal. Dispose of in a manner consistent with federal, state and local regulations. Contact a licensed professional waste disposal service to dispose of this material.

14. TRANSPORT INFORMATION

DOT regulations:

Shipping Name: 1-Bromo-3-Chloropropane
UN Number: 2688
Hazard Class: 6.1 poisonous material; Packing Group: III

Land Transportation ADR/RID:

Danger code (Kemler): 60

15. REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN Harmful

Risk Phrases:

R20/22 Harmful by inhalation and if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

9 Keep container in a well-ventilated place.

23 Do not breath gas / fumes / vapor / spray.

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

36 Wear suitable protective clothing.

60 This material and its container must be disposed of as hazardous waste.

61 Avoid release to the environment.

WGK (Water Danger/ Protection) CAS # 109-70-6: 3

United Kingdom Occupational Exposure Limits

Canada: CAS# 109-70-6 is listed in Canada's DSL List and Ingredient Disclosure List

Exposure Limits: CAS# 109-70-6: OEL-Russia: STEL 3 mg/m³ US Federal

TSCA: CAS # 109-70-6 is listed on the TSCA 8(b) inventory.

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

16. OTHER INFORMATION

Reviewed by BW, MJ

Creation date 10/12/98

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This information is believed to be accurate and represents the 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.

Abbreviations:

N/A Not Applicable

N.D.A. No data available

TLV-STEL Threshold Limit Values (Short-Term Exposure Limit)

TLV-TWA Threshold Limit Values (Time-Weighted Average)

OSHA PEL-TWA OSHA Permissible Exposure Level