



Material Safety Data Sheet

CARDINAL PROFESSIONAL PRODUCTS

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1. PRODUCT IDENTIFICATION

PRODUCT NAME:	PIC-BROM 25	PIC-BROM 50
	PIC-BROM 33	PIC-BROM 55
	PIC-BROM 43	PIC-BROM 67
CHEMICAL NAME AND SYNONYMS:		
Methyl Bromide	monobromomethane, MeBr, MB	
Chloropicrin	trichloronitromethane, PIC	
CHEMICAL FAMILY:		
Methyl Bromide	brominated hydrocarbons	
Chloropicrin	halonitroalkanes	
FORMULA:		
Methyl Bromide	CH ₃ BR	
Chloropicrin	CCl ₃ NO ₂	
CAS NO.:		
Methyl Bromide	77-83-9	
Chloropicrin	76-06-2	

2. HAZARDOUS INGREDIENTS

PRODUCT COMPONENTS (Percent Composition By Weight):

<u>Product</u>	<u>Methyl Bromide</u>	<u>Chloropicrin</u>
PIC-BROM 25	75.0	25.0
PIC-BROM 33	67.0	33.0
PIC-BROM 43	57.0	43.0
PIC-BROM 50	50.0	50.0
PIC-BROM 55	45.0	55.0
PIC-BROM 67	33.0	67.0

PERMISSIBLE EXPOSURE LEVELS OF PRODUCT COMPONENTS:

<u>Chemical</u>	<u>TLV (ACGIH)</u>
Methyl Bromide	5 ppm
Chloropicrin	0.1 ppm

3. PHYSICAL DATA

BOILING POINT:	Unknown for mixtures MB: 38.4°F/3°C PIC: 234°F/112°C
VAPOR PRESSURE (68°F/20°C):	Max. 1,000 mmHg for PIC-BROM 25, less for other mixtures.
VAPOR DENSITY (air = 1):	Unknown for mixtures
SOLUBILITY IN WATER (77°F/25°C)	Unknown for mixtures MB: 1.34 g/100ml PIC: 0.16 g/100ml
SPECIFIC GRAVITY (H ₂ O = 1):	Between 1.68 and 1.73
PERCENT VOLATILE (by volume):	100%
APPEARANCE:	Colorless liquid below 38.4°F/3°C, gaseous above this temperature.
ODOR:	Chloropicrin has an irritating tear gas odor.

4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Unknown
FLAMMABLE LIMITS: (At S.T.P) MB: Lel 10%, Uel 15% with high energy ignition source. PIC: not flammable.
EXTINGUISHING: Water fog for cooling; foam; alcohol foam; CO₂, a dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Cool cylinders with water fog to maintain temperature below 175°C/347°F. Wear self-contained breathing apparatus and work from safe, protective position.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Cylinders may rupture violently and release toxic gas due to over pressure when exposed to temperatures in excess of 175°C/347°F.

5. HEALTH HAZARD DATA

EXPOSURE LIMITS: See "Hazardous Components" Section

GENERAL INFORMATION: Extremely hazardous liquid and vapor under pressure. Inhalation may be fatal or cause serious acute illness or delayed lung or nervous system injury. Do not breath vapors. Liquid or excessive vapor can cause serious skin or eye injury which may have a delayed onset. Do not get liquid on skin, in eyes, or on clothing. This product contains chloropicrin which may be irritating to the upper respiratory tract and even at low levels can cause painful irritation to the eyes, producing tearing. If these symptoms occur, leave the area immediately.

EFFECTS OF OVEREXPOSURE

Inhalation: Chloropicrin can cause painful irritation to the eyes, nose, and throat. Early symptoms of overexposure to chloropicrin are lachrymation, respiratory distress and vomiting. Early symptoms of overexposure to methyl bromide are dizziness, headache, nausea and vomiting, weakness and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities. Repeated overexposure can result in blurred vision, staggering gait, and mental imbalance, with probable recovery after a period of no exposure. In extreme cases of overexposure, unconsciousness and death can occur.

Skin and Eye Contact: Liquid can cause severe burns to eyes and skin. Liquid spilled on clothing, shoes, watches, rings, bandages, etc. can expose the skin to high levels of methyl bromide vapor which can cause blistering or burns.

Ingestion: N/A

EMERGENCY AND
FIRST AID
PROCEDURES:

Inhalation: Get exposed person to fresh air. Keep warm. Make sure person can breathe freely. If breathing has stopped, give artificial respiration. Give oxygen if needed. Seek medical attention.

Eyes: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

Skin: Immediately remove contaminated clothing, shoes, and other items covering the skin. Wash contaminated skin area thoroughly with soap and water. Do not wear contaminated clothing.

6. REACTIVITY DATA

STABILITY:	Stable
CONDITIONS TO AVOID:	Containers may rupture violently in fire or high temperatures.
INCOMPATIBILITY:	Do not use aluminum, magnesium, zinc, or alloys of aluminum and magnesium, or zinc coated steel.
HAZARDOUS POLY-MERIZATION:	Will not occur.
HAZARDOUS DECOM-POSITION PRODUCTS:	Phosgene, chlorine, nitrosyl chloride, oxides of carbon and nitrogen, and hydrogen bromide.

7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS LEAKED OR SPILLED:	Evacuate the immediate area of the spill or leak. Use SCBA or combination air-supplied/SCBA respirator for entry into the affected area to correct problem. Move leaking or damaged cylinders or containers outdoors or to an isolated location, observing strict safety precautions. Work up wind if possible. Allow spill to evaporate. Do not permit entry into spill area by unprotected persons until the concentration of methyl bromide is determined to be less than 5 ppm (20 mg/cu.m) and chloropicrin less than 0.1 ppm.
WASTE DISPOSAL METHOD:	(1) Return cylinders to the dealer or distributor according to label instructions. (2) Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are toxic. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

8. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: If the concentration of methyl bromide in the working area, as measured by a direct-reading detector device (such as a Draeger gas detector) does not exceed 5 ppm (20 mg/cu.m), no respiratory protection is required. If this concentration is exceeded at any time, all persons in the area must wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator (such as a U.S. Divers' Survivair or comparable device).

VENTILATION: Sufficient to reduce concentration to TLV.
Local Exhaust: From point of origin of fumes.
General: Provide exhaust from inside of building.

PROTECTIVE CLOTHING: Do not wear gloves of any type, or rubber protective clothing, or rubber boots. Do not wear jewelry on hands. Methyl Bromide is heavier than air and may be trapped by clothing or jewelry and cause skin injury. Wear loose clothing and socks that are cleaned after each wearing.

EYE PROTECTION: Wear goggles or full face shield for eye protection when handling liquid.

9. SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Read label instructions before use. Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area. Do not contaminate water, food, or feed by storage. Store cylinders upright, secured to a rack or wall to prevent tipping. Keep valves closed, and safety caps and valve protection bonnets in place when not in use.

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For Additional Non-Emergency MSDS Information, Contact:

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