



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: VeriSpec[®] 100ppm: Bromodichloromethane, Bromoform, Dibromochloromethane, Chloroform in MeC
Manufactured and Tested in an ISO 17025/ISO 17034 Accredited Facility

Product Number: RV019028

Other Identifying Product Numbers:

1.2. Recommended Use and Restrictions on Use

Calibration Standard

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Acute Toxicity - Oral	Category 3	H301	P264, P270, P301+P310, P321, P330, P405, P501
Eye Damage / Irritation	Category 2	H319	P264, P280, P305+P351+P338, P337+P313
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 2	H371	P260, P264, P270, P308+P311, P405, P501
Flammable Liquids	Category 2	H225	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H371	May cause damage to organs.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks and open flame. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P321	Specific treatment (Wash areas of contact with water.).
P330	Rinse mouth.
P337+P313	If eye irritation persists: Get medical attention.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Methyl Alcohol	CH ₃ OH	32.04 g/mol	67-56-1	99.96
Dichlorobromomethane	CHBrCl ₂	163.82 g/mol	75-27-4	< 0.1
Bromoform	CHBr ₃	252.73 g/mol	75-25-2	< 0.1
Chloroform	CHCl ₃	119.37 g/mol	67-66-3	< 0.1
Chlorodibromomethane	CHBr ₂ Cl	208.27 g/mol	124-48-1	< 0.1

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Toxic if swallowed. Causes serious eye irritation. May damage fertility or the unborn child. May cause damage to organs.

4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water.).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

5.2. Specific Hazards Arising from the Substance or Mixture

Highly flammable liquid and vapor.

5.3. Special Protective Equipment for Firefighters

Wear protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

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SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Methyl Alcohol (67-56-1)	TLV-TWA	USA	200 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Methyl Alcohol (67-56-1)	TLV-STEL	USA	250 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Methyl Alcohol (67-56-1)	TWA	USA	200 ppm TWA; 260 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chloroform (67-66-3)	PEL-Ceiling	USA	50 ppm Ceiling; 240 mg/m ³ Ceiling	U.S. - OSHA - Final PELs - Ceiling Limits
Chloroform (67-66-3)	TLV-TWA	USA	10 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Chloroform (67-66-3)	TWA	USA	"0.5 mg/m ³ TWA (as Sb)" As Antimony compounds [RR-00585-6]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chloroform (67-66-3)	TLV-TWA	USA	"0.5 mg/m ³ TWA (as Sb)" As Antimony compounds [RR-00585-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Bromoform (75-25-2)	TWA	USA	0.5 ppm TWA; 5 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Bromoform (75-25-2)	TLV-TWA	USA	0.5 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)



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8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: No specific controls are needed. Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection.

Eye Protection: Wear protective gloves and eye protection.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Data not available.

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: Data not available.

Melting/Freezing Point: Data not available.

Initial Boiling Point/Range: Data not available.

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 0.80

Solubility: Data not available.

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.



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SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed.

10.4. Hazardous Decomposition Products

May emit irritating fumes when heated to decomposition.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Toxic if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). Rinse mouth. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

Data not available.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.



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Carcinogenicity:

Not applicable.

Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

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SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 1 mL

UN Number: UN1230

Proper Shipping Name: Methanol

Hazard Class: 3

Packing Group: II

Hazard Label(s):



14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 mL

UN Number: UN1230

Proper Shipping Name: Methanol

Hazard Class: 3 (6.1)

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 mL

UN Number: UN1230

Proper Shipping Name: METHANOL

Hazard Class: 3

Packing Group: II

Hazard Label(s):



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SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chloroform (CAS # 67-66-3): 10 lb EPCRA RQ

Chloroform (CAS # 67-66-3): 10000 lb TPQ

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chlorodibromomethane (CAS # 124-48-1): 100 lb final RQ; 45.4 kg final RQ

Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ; 2270 kg final RQ

Chloroform (CAS # 67-66-3): 10 lb final RQ; 4.54 kg final RQ

Bromoform (CAS # 75-25-2): 100 lb final RQ; 45.4 kg final RQ

Dichlorobromomethane (CAS # 75-27-4): 5000 lb final RQ; 2270 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration

Chloroform (CAS # 67-66-3): "1.0 % de minimis concentration (includes any unique chemical substance that contains Antimony as part of that chemical's infrastructure, listed under Chemical Category N010)" As Antimony compounds [RR-00585-6]

Chloroform (CAS # 67-66-3): 0.1 % de minimis concentration

Bromoform (CAS # 75-25-2): 1.0 % de minimis concentration

Dichlorobromomethane (CAS # 75-27-4): 0.1 % de minimis concentration

15.5. Massachusetts Right-to-Know Substance List

Chlorodibromomethane (CAS # 124-48-1): Present

Methyl Alcohol (CAS # 67-56-1): Present

Chloroform (CAS # 67-66-3): Carcinogen; Extraordinarily hazardous

Bromoform (CAS # 75-25-2): Present

Dichlorobromomethane (CAS # 75-27-4): Carcinogen; Extraordinarily hazardous

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15.6. Pennsylvania Right-to-Know Hazardous Substances

Chlorodibromomethane (CAS # 124-48-1): "Environmental hazard" As Halomethanes [RR-00327-0]
Chlorodibromomethane (CAS # 124-48-1): "Present" As Halomethanes [RR-00327-0]
Chlorodibromomethane (CAS # 124-48-1): Environmental hazard
Chlorodibromomethane (CAS # 124-48-1): Present
Methyl Alcohol (CAS # 67-56-1): "Present" As Denatured alcohols [RR-00113-8]
Methyl Alcohol (CAS # 67-56-1): Environmental hazard
Methyl Alcohol (CAS # 67-56-1): Present
Chloroform (CAS # 67-66-3): "Environmental hazard" As Antimony compounds [RR-00585-6]
Chloroform (CAS # 67-66-3): "Environmental hazard" As Halomethanes [RR-00327-0]
Chloroform (CAS # 67-66-3): "Present" As Antimony compounds [RR-00585-6]
Chloroform (CAS # 67-66-3): "Present" As Halomethanes [RR-00327-0]
Chloroform (CAS # 67-66-3): Environmental hazard
Chloroform (CAS # 67-66-3): Environmental hazard; Special hazardous substance
Chloroform (CAS # 67-66-3): Present
Bromoform (CAS # 75-25-2): "Environmental hazard" As Halomethanes [RR-00327-0]
Bromoform (CAS # 75-25-2): "Present" As Halomethanes [RR-00327-0]
Bromoform (CAS # 75-25-2): Environmental hazard
Bromoform (CAS # 75-25-2): Present
Dichlorobromomethane (CAS # 75-27-4): "Environmental hazard" As Halomethanes [RR-00327-0]
Dichlorobromomethane (CAS # 75-27-4): "Present" As Halomethanes [RR-00327-0]
Dichlorobromomethane (CAS # 75-27-4): Environmental hazard
Dichlorobromomethane (CAS # 75-27-4): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Chlorodibromomethane (CAS # 124-48-1): carcinogen
Chlorodibromomethane (CAS # 124-48-1): sn 2978
Methyl Alcohol (CAS # 67-56-1): flammable - third degree; teratogen
Methyl Alcohol (CAS # 67-56-1): sn 1222
Methyl Alcohol (CAS # 67-56-1): SN 1222 500 lb TPQ
Chloroform (CAS # 67-66-3): "SN 2223 500 lb TPQ (Category Code N010. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Antimony compounds [RR-00585-6]
Chloroform (CAS # 67-66-3): "sn 2223" As Antimony compounds [RR-00585-6]
Chloroform (CAS # 67-66-3): carcinogen
Chloroform (CAS # 67-66-3): sn 0388
Chloroform (CAS # 67-66-3): SN 0388 500 lb TPQ
Bromoform (CAS # 75-25-2): carcinogen
Bromoform (CAS # 75-25-2): sn 0262
Bromoform (CAS # 75-25-2): SN 0262 500 lb TPQ
Dichlorobromomethane (CAS # 75-27-4): sn 2341
Dichlorobromomethane (CAS # 75-27-4): SN 2341 500 lb TPQ

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15.8. California Proposition 65

Methyl Alcohol (CAS # 67-56-1): developmental toxicity, 3/16/2012
Chloroform (CAS # 67-66-3): 20 µg/day NSRL (oral); 40 µg/day NSRL (inhalation)
Chloroform (CAS # 67-66-3): carcinogen, 10/1/1987
Chloroform (CAS # 67-66-3): developmental toxicity, 8/7/2009
Bromoform (CAS # 75-25-2): 64 µg/day NSRL
Bromoform (CAS # 75-25-2): carcinogen, 4/1/1991
Dichlorobromomethane (CAS # 75-27-4): 5 µg/day NSRL
Dichlorobromomethane (CAS # 75-27-4): carcinogen, 1/1/1990

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chlorodibromomethane (CAS # 124-48-1): Present (NDSL)
Methyl Alcohol (CAS # 67-56-1): Present (DSL)
Methyl Alcohol (CAS # 67-56-1): Present (NDSL)
Chloroform (CAS # 67-66-3): Present (DSL)
Bromoform (CAS # 75-25-2): Present (CEPA, subsection 81(3) applies) (DSL)
Dichlorobromomethane (CAS # 75-27-4): Present (NDSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Chlorodibromomethane (CAS # 124-48-1): Present (ACTIVE)
Methyl Alcohol (CAS # 67-56-1): Present (ACTIVE)
Chloroform (CAS # 67-66-3): Present (ACTIVE)
Bromoform (CAS # 75-25-2): Present (ACTIVE)
Dichlorobromomethane (CAS # 75-27-4): Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chlorodibromomethane (CAS # 124-48-1): 204-704-0
Methyl Alcohol (CAS # 67-56-1): 200-659-6
Methyl Alcohol (CAS # 67-56-1): 270-649-4
Chloroform (CAS # 67-66-3): 200-663-8
Bromoform (CAS # 75-25-2): 200-854-6
Dichlorobromomethane (CAS # 75-27-4): 200-856-7

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Highly flammable liquid and vapor. Toxic if swallowed. Causes serious eye irritation. May damage fertility or the unborn child. May cause damage to organs.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). Rinse mouth. If eye irritation persists: Get medical attention. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

Store in a well-ventilated place. Keep cool. Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

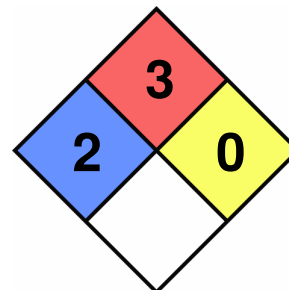
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 2
Flammability: 3
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2023-10-11

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.