

SAFETY DATA SHEET

Creation Date 22-Jun-2009 Revision Date 19-Dec-2025 Revision Number 8

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name Boron tribromide dimethyl sulfide. 1M solution in methylene chloride

Cat No.: AC428320000; AC428321000; AC428328000

Synonyms Dimethyl sulfide-tribromoborane; Tribromoborane-methyl sulfide

Recommended Use Uses advised against

Laboratory chemicals.

Food, drug, pesticide or biocidal product use. This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/ product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory

chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7)

Industrial and commercial use as a paint and coating remover from safety critical, corrosion sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029;

(13) Disposal; and (14) Export.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100 Acros Organics One Reagent Lane Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Acute oral toxicity

Acute dermal toxicity

Acute Inhalation Toxicity - Vapors

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Category 1

Category 3

Target Organs - Respiratory system, Central nervous system (CNS).

Label Elements

Signal Word

Danger

Hazard Statements

Harmful in contact with skin
Causes severe skin burns and eye damage
May cause respiratory irritation
May cause drowsiness or dizziness
May cause cancer
Toxic if swallowed or if inhaled



Precautionary Statements

Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

Response

Immediately call a POISON CENTER or doctor

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Skin

Take off contaminated clothing and wash before reuse

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

Eves

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

Rinse mouth

Revision Date 19-Dec-2025

Boron tribromide dimethyl sulfide, 1M solution in methylene chloride

Do NOT induce vomiting

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

Other hazards

Stench. Contains a known or suspected endocrine disruptor. WARNING. Cancer - https://www.p65warnings.ca.gov/.

3. Composition/information on Ingredients

Component	CAS No	Weight %
Methylene chloride	75-09-2	75-80
Boron, tribromo[thiobis[methane]]-, (T-4)-	29957-59-3	20-25

4. First-aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Eye ContactRinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

Inhalation If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim

ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh

air. Immediate medical attention is required.

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and

effects

Causes burns by all exposure routes. Causes central nervous system depression: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea

and vomiting

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point No information available Method - No information available

Autoignition Temperature

Explosion Limits

No information available

Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO2). Sulfur oxides. Oxides of boron.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

HealthFlammabilityInstabilityPhysical hazards311N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate

personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. **Up**

7. Handling and Storage						
Handling	Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.					
Storage.	Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Bases. Water.					

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Methylene chloride	TWA: 50 ppm	(Vacated) TWA: 500 ppm	IDLH: 2300 ppm	TWA: 50 ppm
		(Vacated) STEL: 2000 ppm		
		(Vacated) Ceiling: 1000 ppm		
		TWA: 25 ppm		
		STEL: 125 ppm		

<u>Legend</u>

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering MeasuresUse only under a chemical fume hood. Ensure that eyewash stations and safety showers

are close to the workstation location.

Personal Protective Equipment

Wear appropriate protective eyeglasses or chemical safety goggles as described by **Eye/face Protection**

OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard

EN166. Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard **Respiratory Protection**

EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Liquid

low boiling organic solvent. Type AX. Brown. conforming to EN371. or. Organic gases and **Recommended Filter type:**

vapours filter. Type A. Brown. conforming to EN14387.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical State Liquid

Color

Odor Stench

Odor Threshold No information available

Values Property Remarks Method

Melting Point/Range No data available **Softening Point** No data available

Boiling Point/Range No information available Flash Point No information available

Method - No information available Flammability (liquid) No data available

Flammability (solid,gas) Not applicable

No data available **Explosion Limits**

Autoignition Temperature No data available **Decomposition Temperature** No data available No information available pН No data available **Viscosity** Water Solubility Slightly soluble

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

log Pow Component Methylene chloride 1.25

Vapor Pressure No data available

Density / Specific Gravity 1.456

Not applicable Liquid **Bulk Density Vapor Density** No data available (Air = 1.0)Not applicable (liquid)

Particle characteristics

Other Information

Molecular Formula C2 H6 B Br3 S **Molecular Weight** 312.66

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stable under normal conditions. Stability

netrylene Chloride

Revision Date 19-Dec-2025

Conditions to Avoid Incompatible products. Excess heat.

Incompatible Materials Strong oxidizing agents, Bases, Water

Hazardous Decomposition Products Carbon monoxide (CO₂), Carbon dioxide (CO₂), Sulfur oxides, Oxides of boron

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous ReactionsNone under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation Avoid breathing vapors or mists. Harmful by inhalation.

Ingestion May be harmful if swallowed.

Eyes Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including

blindness. Vapor may cause irritation.

Skin Avoid contact with skin. Causes burns. Skin Corrosion/Irritation. Prolonged skin contact

may defat the skin and produce dermatitis. Harmful in contact with skin.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methylene chloride	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	53 mg/L (Rat) 6 h
			76000 mg/m ³ (Rat) 4 h

Toxicologically Synergistic

Products

No information available

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; Category 2

Limited evidence of a carcinogenic effect The table below indicates whether each agency

has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Methylene chloride	75-09-2	Group 2A	Reasonably	A3	X	A3
			Anticipated			
Boron,	29957-59-3	Not listed	Not listed	Not listed	Not listed	Not listed
tribromo[thiobis[metha						
ne]]-, (T-4)-						

IARC (International Agency for Research on Cancer)

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

NTP: (National Toxicity Program)

Known - Known Carcinogen

ACGIH: (American Conference of Governmental Industrial

Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens

A1 - Confirmed Human Carcinogen A2 - Suspected Human Carcinogen A3 - Confirmed Animal Carcinogen

A4 - Not Classifiable as a Human Carcinogen

A5 - Not Suspected as a Human Carcinogen

(g) reproductive toxicity; No data available

Category 3 (h) STOT-single exposure;

Central nervous system (CNS). Results / Target organs

No data available (i) STOT-repeated exposure;

No information available. **Target Organs**

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated.

delayed

Symptoms / effects,both acute and Causes central nervous system depression. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties Assess endocrine disrupting

properties for human health

Contains a substance on the National Authorities Endocrine Disruptor Lists

12. Ecological information

Ecotoxicity

Do not empty into drains. .

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methylene chloride	EC50:>660 mg/L/96h	Pimephales promelas:	EC50: 1 mg/L/24 h	EC50: 140 mg/L/48h
-	_	LC50:193 mg/L/96h	EC50: 2.88 mg/L/15 min	_

Persistence and Degradability May persist based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Is not likely mobile in the environment due its low water solubility.

Component	log Pow
Methylene chloride	1.25

13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methylene chloride - 75-09-2	U080	-

14. Transport information

DOT

UN-No UN2922

Proper Shipping Name Corrosive liquid, toxic, n.o.s.

Technical Shipping Name (boron tribromide dimethylsulfide, dichloromethane)

Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group ||

TDG

UN-No UN2922

Proper Shipping Name Corrosive liquid, toxic, n.o.s.

Technical Shipping Name (boron tribromide dimethylsulfide, dichloromethane)

Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group ||

<u>IATA</u>

UN2922

Proper Shipping Name Corrosive liquid, toxic, n.o.s.

Technical Shipping Name (boron tribromide dimethylsulfide, dichloromethane)

Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group ||

IMDG/IMO

UN-No UN2922

Proper Shipping Name Corrosive liquid, toxic, n.o.s.

Technical Shipping Name (boron tribromide dimethylsulfide, dichloromethane)

Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group II

15. Regulatory Information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Methylene chloride	75-09-2	Χ	ACTIVE	R
Boron, tribromo[thiobis[methane]]-, (T-4)-	29957-59-3	-	-	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

Section 6(a) of the Toxic Substances Control Act (TSCA)

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/ product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3)

Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

Component	CAS No	TSCA 12(b) - Notices of Export
Methylene chloride	75-09-2	Section 6

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Methylene chloride	75-09-2	Χ	-	200-838-9	Χ	Χ	Χ	Х	Χ	KE-23893
Boron, tribromo[thiobis[methane]]-, (T-4)-	29957-59-3	-	-	-	-	-		-	-	-

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting threasholds
Methylene chloride	75-09-2	75-80	0.1 %	-

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

CVVA (Clean Water Act)				
Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Methylene chloride	-	=	X	X

Clean Air Act

0.04			
Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methylene chloride	X		-

OSHA - Occupational Safety and

Not applicable

Health Administration

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Methylene chloride	125 ppm STEL	-
,	12.5 ppm Action Level	
	25 ppm TWA	

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Methylene chloride	1000 lb	-	1000 lb 454 kg

California Proposition 65

This product contains the following Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Methylene chloride	75-09-2	Carcinogen	200 μg/day 50 μg/day	Carcinogen

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Methylene chloride	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland

Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Methylene chloride	75-09-2	-	Use restricted. See entry 59. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	-
Boron, tribromo[thiobis[methane]]-, (T-4)-	29957-59-3	-	-	-

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

	Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous
L						Substances (RoHS)

Methylene chloride	75-09-2	Listed	Not applicable	Not applicable	Not applicable
Boron,	29957-59-3	Not applicable	Not applicable	Not applicable	Not applicable
tribromo[thiobis[methane]]-,					
(T-4)-					

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Methylene chloride	75-09-2	Not applicable	Not applicable	Not applicable	Annex I - Y45
Boron, tribromo[thiobis[methane]]-, (T-4)-	29957-59-3	Not applicable	Not applicable	Not applicable	Not applicable

1 4	Othor	Information
10	CHIC	ппоппапоп

Prepared By Product stewardship (Regulatory Affairs)

Thermo Fisher Scientific

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Revision Summary Updated to the U.S. Department of Labor's Occupational Safety and Health Administration

(OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200,

2024), May 20, 2024, effective July 19, 2024.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS