Birch BIOTECH

Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Dichloromethane
SYNONYMS: Methylene chloride
PRODUCT CODES: 1913-5

MANUFACTURER: Birch Biotech, LLC
ADDRESS: 690 Stockton Drive, Suite 106, Exton, PA 19341

CHEMTREC PHONE: 800-424-9300
SUPPORT: 484-318-2754

PRODUCT USE: For use in HPLC, GC, ACS experiments & Spectrophotometry.

PREPARED BY: AA

SECTION 1 NOTES:
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.

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Eye Damage/Irritation Category 2; Skin damage/irritation Category 2; Acute Toxicity, Oral Category 4, Specific Target Organ Toxicity – single exposure Category 3; Specific Target Organ Toxicity – repeated exposure Category 2; Carcinogenicity Category 1B; Chronic Aquatic Toxicity; Category 1



Signal Word*:* Warning!

Hazard Phrases	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.

H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Phrases	
P202	Do not handle until all safety precautions are read and understood.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P270	Do not eat, drink or smoke when using this product.
P281	Use personal protective equipment as required.
P314	Get medical attention/advice if you feel unwell.
P264	Wash hands thoroughly after handling.
P302+P352	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P305-P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so – continue rinsing. If eye irritation persists: Get medical advice/attention.
P304-P340	IN INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P405	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
P273	Avoid release to the environment.

SECTION 2 NOTES:
Contains a known or suspected endocrine disruptor. WARNING. Cancer - https://www.p65warnings.ca.gov/.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	***CAS NO.***	***% VOL***
Dichloromethane	75-09-2	>99

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation persists.

SKIN: In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If skin irritation occurs: Get medical attention/advice.

INGESTION: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

SECTION 4 NOTES:
Note to Physician: Treat symptomatically

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT: Not Applicable

AUTOIGNITION TEMPERATURE: 556°C (1,032.8°F)

NFPA HAZARD CLASSIFICATION
HEALTH:2 FLAMMABILITY: 1 REACTIVITY: 0

HMIS HAZARD CLASSIFICATION
HEALTH:2 * CHRONIC HEALTH HAZARD FLAMMABILITY: 1 REACTIVITY: 0

EXTINGUISHING MEDIA: Use extinguishing media suitable for surrounding fire. Methylene chloride may burn but will not readily ignite. Use water spray to keep fire-exposed containers cool.

NOT SUITABLE: Do not use water jet.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing MSHA/NIOSH (approved or equivalent) to protect contact with skin and eyes. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, Hydrogen chloride gas

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide (CO). Carbon dioxide (CO_2). Phosgene. Hydrogen chloride gas.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Small spill and leak: Ensure adequate ventilation. Dilute with water and mop, or absorb with an inert dry material and place in appropriate waste disposal container.

Large spill and leak: Stop leak if without risk. Absorb with DRY earth, sand, or other non-combustible material. Avoid skin and eye contact. Prevent entry into sewers, basements or confined areas; dike if needed. Additional protective equipment such as full-face respirator, full body suit and boots may be required.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING: Do not get in eyes or on skin. Do not breathe vapor or mist. If potential for splashing exists, protect skin by using sleeve protectors, aprons and face-shield. Immediately remove contaminated clothing. Wash thoroughly after handling. Handle product only in closed system or provide appropriate exhaust ventilation. Reacts with aluminum and its alloys.

STORAGE: Keep containers closed in a well-ventilated place and out of reach of children. Containers which are opened must be resealed and kept upright to prevent leakage. Store at room temperature. Do not store in aluminum containers.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

PERSONAL PROTECTIVE MEASURES: Wear gloves, lab coat, eye protection and impervious footwear. Approved/certified respirator if airborne concentrations exceed exposure limits

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

WORK HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

EXPOSURE GUIDELINES:
OSHA Permissible Exposure Limits (PELs):

Reagent	*CAS#*	*OSHA PEL TWA*
Methylene chloride	75-09-2	25 ppm

ACGIH Threshold Limit values (TLVs):

Reagent	*CAS#*	*ACGIH PEL TWA*	*ACGIH STEL*
Methylene chloride	75-09-2	50 ppm (1640 mg/m^3)	125 ppm (2000 mg/m^3)

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, colorless
ODOR: Chloroform like
PHYSICAL STATE: Liquid
pH AS SUPPLIED: Not available
BOILING POINT: 40°C (104°F)
MELTING POINT/FREEZING POINT: -97°C (-142°F)
VAPOR PRESSURE (mmHg): 350 mm Hg @20°C
VAPOR DENSITY (AIR = 1): 2.93
SPECIFIC GRAVITY: 1.33
EVAPORATION RATE: 2.8 (Butyl acetate=1)
SOLUBILITY IN WATER: Slightly soluble in water.
MOLECULAR WEIGHT: 84.92 g/mol
VISCOSITY: Not established

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions of use. Decomposes on exposure to light. May form explosive mixtures in atmospheres having high oxygen content.

CONDITIONS TO AVOID (STABILITY): Excessive heat. Attacks some plastics, rubber, coatings.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents, strong bases, chemically active metals

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Thermal breakdown of this product during fire or very high heat conditions

may evolve the following decomposition products: oxides of Carbon, Hydrogen Chloride gas, phosgene

HAZARDOUS POLYMERIZATION: No hazardous polymerization

CONDITIONS TO AVOID: Heat, open flame

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Component	Oral LD50	Inhalation LC50	Dermal LD50
Methylene chloride	1600 mg/kg (Rat)	49100 mg/m3 (Mouse) 6hr 54000 mg/m3 (Mouse) 2hr	>2000 mg/kg (Rat)

POTENTIAL HEALTH EFFECTS:

Inhalation: Nose, throat and lung irritation with coughing wheezing and shortness of breath.
Ingestion: Harmful if swallowed and aspirated.
Skin: Harmful if absorbed through skin. Causes skin irritation and burns.
Eyes: May cause eye irritation and burns.

CARCINOGENICITY:

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Methylene chloride	75-09-2	Group 2 B	Suspected carcinogen	A3	Listed	A3

TERATOGENICITY:

Inhalation, rat: TCLo = 4500 ppm/24H (female 1-17 day(s) after conception)
Effects on Newborn: behavioral.; Inhalation, rat: TCLo = 1250 ppm/7H (female 6-15 day(s) after conception)
Specific Developmental Abnormalities: musculoskeletal system and urogenital system.
Reproductive Effects: Reproductive effects have occurred in experimental animals.
Mutagenicity: DNA inhibition: Human, Fibroblast = 5000 ppm/1H (Continuous).;
Morphological transformation: Rat, Embryo = 160 umol/L.;
DNA damage: Oral, rat = 1275 mg/kg.; Inhalation, mouse: TCLo = 2000 ppm/5H/2Y-C (Tumorigenic - Carcinogenic by RTECS criteria--Lungs, Thorax, or Respiration - Tumors).

SIGNS AND SYMPTOMS OF EXPOSURE:

Headache, dizziness, central nervous system depression, lack of coordination and loss of consciousness. Repeated skin exposure can cause rash, dryness and redness.

ROUTES OF ENTRY: Skin/eye contact, inhalation, and ingestion.

TARGET ORGANS: Liver, pancreas, blood, central nervous system, heart, kidney

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY:

Acute Fish Toxicity:
LC50 Bluegill sunfish – 230 mg/L – 24 hr; Static
LC50 Fathead Minnow – 196 mg/L – 96 hr

Toxicity to Daphnia and aquatic invertebrates:
LC50 Daphnia magna 2270 mg/L 24 hr

PERSISTANCE AND DEGRADABILITY: Persistence is unlikely based on information available.

BIOACCUMULATIVE POTENTIAL: Biodegrades under aerobic conditions.

MOBILITY IN SOIL: Expected to evaporate from near surface soil into the atmosphere; expected to leach.

PBT and vPvB ASSESSMENT: Not required.

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Unused product: dispose as a regulated hazardous waste. Burn in a chemical incinerator equipped with an afterburner and scrubber. Spent product or spill clean up–follow all provincial, local, state, and federal regulations. DO NOT allow release into storm sewers.

SECTION 13 NOTES: CAS# 75-09-2: waste number U080.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

UN No. UN1593
Proper Shipping Name: Dichloromethane
Hazard Class: 6.1
Packing Group: III

IMDG

UN No. UN1593
Proper Shipping Name: Dichloromethane
Hazard Class: 6.1
Packing Group: III
EMS-No: F-E, S-D
Marine pollutant: Yes

IATA

UN No. UN1593
Proper Shipping Name: Dichloromethane
Hazard Class: 6.1
Packing Group: III

SECTION 15: REGULATORY INFORMATION

United States

HCS Classification: Carcinogen, Target organ effects, Irritant

U.S. Federal regulations:

TSCA 8(a) IUR: Listed on inventory.
United States inventory (TSCA 8b): Listed on inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Acute Health Hazard; Chronic

SARA 313 Form R – Reporting: The following components are subject to reporting levels established by SARA Title III, Section 313: None

Section 6(a) of the Toxic Substances Control Act (TSCA)
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DEA List I & II Chemicals
(Precursor Chemicals): Not Listed

CERCLA: Dichloromethane CAS#75-09-2:1000 lbs final RQ; 454 kg final RQ

RTK STATES: Dichloromethane CAS#75-09-2 PA, NJ, NY, MN, MA, CA

California Prop. 65 ***WARNING:*** This product can expose you to chemicals including Dichloromethane, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

CANADA
WHMIS (Canada): D1B Toxic Material Causing Immediate and Serious Toxic Effects.
D2A Very Toxic Material Causing Other Toxic Effects. Carcinogenicity: IARC 2B
D2B Toxic Material Causing Other Toxic Effects.

Canadian lists:
CEPA Toxic substances: The following components are listed: None
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: None

CEPA DSL / CEPA NDSL: CAS#75-09-2 This product is listed
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
International regulations
International lists: (***EINESC):*** This product is on the European Inventory of Existing Commercial Chemical Substances.

SECTION 16: OTHER INFORMATION

National Fire Protection Association (NFPA)



DISCLAIMER: This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Birch Biotech, LLC be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

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