Safety Data Sheet

Material Name: CLEAN HARBORS METHYLENE CHLORIDE **SDS ID: 89075**

* * * Section 1 - Identification * * *

Product Identifier

CLEAN HARBORS METHYLENE CHLORIDE

Product Code

Hebron

Synonyms

Dichloromethane.

Recommended Use

Cleaning agent. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

Restrictions on 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 Seciton 3(13)) for consumer paint or coating removal.
- Tetrachloroethylene (127-18-4): After December 8, 2026 this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers for any use. After March 8, 2027, 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 PCE equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant/intermediate; (2) Processing into formulation, mixture or reaction product; (3) Processing by repackaging; (4) Recycling; (5) Industrial and commercial use as solvent in open-top batch vapor degreasing; (6) Industrial and commercial use as solvent in closed-loop batch vapor degreasing; (7) Industrial and commercial use in maskant for chemical milling; (8) Industrial and commercial use as a processing aid in catalyst regeneration in petrochemical manufacturing; (9) Industrial and commercial use as a processing aid in sectors other than petrochemical manufacturing; (10) Industrial and commercial use as solvent for cold cleaning of tanker vessels; (11) Industrial and commercial use as energized electrical cleaner; (12) Industrial and commercial use in laboratory chemicals; (13) Industrial and commercial use in solvent-based adhesives and sealants; (14) Industrial and commercial use in dry cleaning in 3rd generation machines until December 20, 2027; (15) Industrial and commercial use in all dry cleaning and related spot cleaning until December 19, 2034; (16) Export; and (17) Disposal.
- Trichloroethylene (79-01-6): After June 16, 2025, this chemical/product is and can only be domestically manufactured, imported, processed, or distributed in commerce for the following purposes until the following prohibitions take effect: (1) Processing as an intermediate a) for the manufacture of HFC-134a until June 18, 2033, and b) for all other processing as a reactant/intermediate until December 18, 2026; (2) Industrial and commercial use as a solvent for open-top batch vapor degreasing until December 18, 2025; (3) Industrial and commercial use as a solvent for closed-loop batch vapor degreasing until December 18, 2025, except for industrial and commercial use in batch vapor degreasing for land-based DoD defense systems by Federal agencies and their contractors until December 18, 2029, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing necessary for rocket engine cleaning by Federal agencies and their contractors until December 18, 2031, and except for industrial and commercial use of TCE in closed-loop and open-top batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices until December 18, 2031, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing for rayon fabric scouring for end use in rocket booster nozzle production by Federal agencies and their contractors until December 18, 2034; (4) Industrial and commercial use in processing aid (a) for lithium battery separator manufacturing until December 18, 2029, and (b) for lead-acid battery separator manufacturing until December 18, 2044, and (c) for specialty polymeric microporous sheet material manufacturing until December 18, 2039, and (d) in process solvent used in battery manufacture; in process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; in extraction solvent used in caprolactam manufacture; and in precipitant used in beta-cyclodextrin manufacture until December 18, 2026; (5) Industrial and commercial uses for vessels of the Armed Forces and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems until December 18, 2034; and (6) Industrial and commercial use for laboratory use (a) for essential laboratory activities until December 18, 2074 and (b) for asphalt testing and recovery using manual centrifuge processes until December 18, 2029 and for asphalt testing and recovery until December 18, 2034.

Manufacturer Information

Clean Harbors Recycling Services of Ohio LLC
581 Milliken Drive SD
Hebron, Ohio 43025

Phone: 1-740-929-3532
www.cleanharbors.com

Emergency # 1-800-645-8265

Issue Date

February 18, 2025

Supersedes Issue Date

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Original Issue Date

November 7, 1985

* * * Section 2 - Hazard(s) Identification * * *

Classification in Accordance with 29 CFR 1910.1200.

Skin Corrosion / Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
Germ Cell Mutagenicity, Category 1B
Carcinogenicity, Category 1B
Toxic to Reproduction, Category 2
Specific Target Organ Toxicity - Single Exposure, Category 3 (respiratory tract)
Specific Target Organ Toxicity - Repeated Exposure, Category 1 (lungs, liver, kidneys, heart, blood, and central nervous system)

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

DANGER!

Hazard Statement(s)

Causes skin irritation.
Causes serious eye irritation
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation
Causes damage to lungs, liver, kidneys, heart, blood, and central nervous system through prolonged or repeated exposure.

Precautionary Statement(s)

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapor or mist. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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 advice/attention.

Storage

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

Disposal

Dispose in accordance with all applicable regulations.

Hazard(s) Not Otherwise Classified

None known.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
75-09-2	Methylene chloride	95-100
106-88-7	1,2-Butylene oxide	0.1-0.2
127-18-4	Tetrachloroethylene	0-1
79-01-6	Trichloroethene	0-1
75-56-9	Propylene oxide	0-1
71-55-6	1,1,1-Trichloroethane	0-1

* * * Section 4 - First Aid Measures * * *

Description of Necessary Measures

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Remove contaminated clothing and wash before reuse.

Eyes

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 advice/attention.

Ingestion

IF SWALLOWED: Do NOT induce vomiting. Immediately get medical attention. Call 1-800-645-8265 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Most Important Symptoms/Effects

Acute

Respiratory tract irritation, skin irritation, eye irritation

Delayed

Mutagenic effects, cancer, reproductive effects, lung damage, liver damage, kidney damage, heart damage, blood damage, central nervous system damage

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-645-8265 for additional information.

* * * Section 5 - Fire-Fighting Measures * * *

Suitable Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Specific Hazards Arising from the Chemical

Product may burn, but does not ignite readily.

Hazardous Combustion Products

Product may decompose upon heating to produce phosgene, halogenated compounds, carbon monoxide, and unidentified organic compounds.

Special Protective Equipment and Precautions for Firefighters

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Keep storage containers cool with water spray. Heated containers may rupture or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.

* * * Section 6 - Accidental Release Measures * * *

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Clean Up

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean tool into a sealable container for disposal. Do not allow product to enter sewer or waterways. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal. There may be specific regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **Section 15.**

* * * Section 7 - Handling and Storage * * *

Precautions for Safe Handling

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well-ventilated area. Do not allow contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

Incompatibilities

Avoid acids, alkalis, oxidizing agents, plastics, and reactive metals.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Methylene chloride	**75-09-2**
ACGIH:	50 ppm TWA
NIOSH:	2300 ppm IDLH
OSHA (US):	25 ppm TWA; 125 ppm STEL (See 29 CFR 1910.1052) 15 min ; 12.5 ppm Action Level (See 29 CFR 1910.1052); 25 ppm TWA (See 29 CFR 1910.1052) 125 ppm STEL (see 29 CFR 1910.1052)
Mexico:	50 ppm TWA [VLE-PPT]
Tetrachloroethylene	**127-18-4**
ACGIH:	25 ppm TWA; 100 ppm STEL
NIOSH:	150 ppm IDLH
OSHA (US):	100 ppm TWA; 200 ppm Ceiling
1,1,1-Trichloroethane	**71-55-6**
ACGIH:	350 ppm TWA; 450 ppm STEL
NIOSH:	350 ppm Ceiling 15 min ; 1900 mg/m3 Ceiling 15 min; 700 ppm IDLH
OSHA (US):	350 ppm TWA ; 1900 mg/m3 TWA
Propylene oxide	**75-56-9**
ACGIH:	2 ppm TWA
NIOSH:	400 ppm IDLH
OSHA (US):	100 ppm TWA ; 240 mg/m3 TWA
Trichloroethene	**79-01-6**
ACGIH:	10 ppm TWA; 25 ppm STEL
NIOSH:	SK: SYS-DIR(IRR)-SEN (Aug 2017); 1000 ppm IDLH
OSHA (US):	100 ppm TWA; 200 ppm Ceiling

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

Methylene chloride (75-09-2)

0.3 mg/l Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)

Tetrachloroethylene (127-18-4)

3 ppm Medium: end-exhaled air Time: prior to shift Parameter: Tetrachloroethylene ; 0.5 mg/l Medium: blood Time: prior to shift Parameter: Tetrachloroethylene

1,1,1-Trichloroethane (71-55-6)

40 ppm Medium: end-exhaled air Time: prior to last shift of workweek Parameter: Methyl chloroform ; 10 mg/l Medium: urine Time: end of workweek Parameter: Trichloroacetic acid (nonspecific, semi-quantitative); 30 mg/l Medium: urine Time: end of shift at end of workweek Parameter: Total trichloroethanol (nonspecific, semi-quantitative); 1 mg/l Medium: blood Time: end of shift at end of workweek Parameter: Total trichloroethanol (nonspecific)

Trichloroethene (79-01-6)

15 mg/l Medium: urine Time: end of shift at end of workweek Parameter: Trichloroacetic acid (nonspecific); 0.5 mg/l Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethanol without hydrolysis (nonspecific); Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative); Medium: end-exhaled air Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative)

Appropriate Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Individual Protective Measures, such as Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, Gloves, and Lab coat or apron.

Eyes/Face Protection

Safety glasses with side shields should be worn at a minimum. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Contact lens use is not recommended.

Skin Protection

Where skin contact is likely, wear chemical impervious gloves; use of neoprene, nitrile, natural rubber (latex) or equivalent gloves is not recommended. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Respiratory Protection

Use NIOSH-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limits. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Clear, colorless liquid, sweet odor	**pH:**	Not applicable.
Boiling Point:	104°F (40°C)	**Odor Threshold:**	25 ppm
Solubility (H2O):	Slight.	**Melting Point:**	-139°F (-95°C)
Density:	11.1 LB/US gal (1330 g/l)	**Specific Gravity:**	1.33 (water =1)
Evaporation Rate:	27.5 (butyl acetate = 1)	**Octanol/H2O Coeff.:**	Log Pow = 1.25
LFL:	13 VOL%	**Auto Ignition Temperature:**	1033°F (556°C)
UFL:	23 VOL%	**Flash Point:**	Not applicable
Vapor Pressure:	400 mm Hg at 75°F (24°C)	**Viscosity:**	Not available.

Other Property Information

No additional information is available.

* * * Section 10 - Stability & Reactivity * * *

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Conditions To Avoid

Avoid heat, sparks, or flame.

Incompatible Materials

Avoid acids, alkalis, oxidizing agents, plastics, and reactive metals.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **Section 5.**

* * * Section 11 - Toxicological Information * * *

Toxicity Data and Information

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Methylene chloride (75-09-2)

Oral LD50 Rat 1600 mg/kg; Inhalation LC50 Rat 53 mg/L 6 h

1,2-Butylene oxide (106-88-7)

Oral LD50 Rat 900 mg/kg; Dermal LD50 Rabbit 1255 - 2546 mg/kg; Inhalation LC50 Rat >6300 mg/m3 4 h

Tetrachloroethylene (127-18-4)

Oral LD50 Rat 2629 mg/kg; Inhalation LC50 Rat 27.8 mg/L 4 h

1,1,1-Trichloroethane (71-55-6)

Oral LD50 Rat 9600 mg/kg; Dermal LD50 Rabbit >15800 mg/kg; Inhalation LC50 Rat 18000 ppm 4 h

Propylene oxide (75-56-9)

Oral LD50 Rat 520 mg/kg; Dermal LD50 Rabbit 1244 mg/kg; Inhalation LC50 Rat 0.948 mg/L 4 h

Trichloroethene (79-01-6)

Oral LD50 Rat 4920 mg/kg; Dermal LD50 Rabbit 29000 mg/kg; Inhalation LC50 Rat 26 mg/L 4 h

Information on Likely Routes of Exposure

Inhalation

Irritation, irregular heartbeat, lung damage, liver damage, kidney damage, heart damage, blood damage, central nervous system damage, nausea, vomiting, headache, dizziness, loss of coordination, numbness

Ingestion

Irritation, nausea, vomiting, central nervous system damage, headache, liver damage, kidney damage

Skin Contact

Skin irritation, redness, drying, Not likely to be absorbed in harmful amounts.

Eye Contact

Eye irritation, redness, tearing, blurred vision

Immediate Effects

High concentrations of vapor or mist may be harmful or fatal if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause irregular heartbeat, lung, liver, and kidney damage, nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause suffocation (hypoxia), blood damage, rapid central nervous system depression, sudden collapse, coma, and/or death., May cause eye irritation or pain with redness, tearing, and/or blurred vision., May cause skin irritation, redness, burns and/ or drying., This product is not likely to be absorbed through the skin in harmful amounts., May be harmful or fatal if swallowed. May cause throat irritation, pharyngeal fluid buildup (edema), gastrointestinal ulceration, hemorrhage, reduction of blood oxygen-carrying capacity, nausea, vomiting, and central nervous system effects as noted under inhalation. Large doses may cause liver and kidney damage.., Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Delayed Effects

Prolonged or repeated inhalation may cause toxic effects as noted under Acute inhalation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis) and/or burns. Prolonged contact with this product may cause allergic skin sensitization reactions., Contains material which may cause skin, liver, kidney, heart, blood and central nervous system damage. Trichloroethylene has demonstrated human effects of skin sensitization. 1,1,1-Trichloroethane has demonstrated human effects of cardiac sensitization. Contains material which may cause birth defects. Methylene chloride, 1,1,1-trichloroethane, perchloroethylene, trichloroethylene, and 1,2-propylene oxide have demonstrated human effects of mutagenicity. Butylene oxide has demonstrated animal effects of mutagenicity. Methylene chloride, 1,1,1-trichloroethane, perchloroethylene, trichloroethylene, and 1,2-propylene oxide have demonstrated experimental effects of reproductive toxicity.

Irritation/Corrosivity

Respiratory tract irritation, skin irritation, eye irritation

Respiratory Sensitization

No information available for the product.

Skin Sensitization

No information available for the product.

Carcinogenicity

Component Carcinogenicity

Methylene chloride	**75-09-2**
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 110 [2017] ; Monograph 71 [1999] (Group 2A (probably carcinogenic to humans))
NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 5 (low carcinogenic potency)
OSHA:	Present
OSHA:	see 29 CFR 1910.1052
NIOSH:	potential occupational carcinogen
1,2-Butylene oxide	**106-88-7**

IARC:	Monograph 71 [1999] ; Monograph 47 [1989] (overall evaluation upgraded from 3 to 2B with supporting evidence from other relevant data) (Group 2B (possibly carcinogenic to humans))
DFG:	Category 2 (considered to be carcinogenic for man)
OSHA:	Present
Tetrachloroethylene	**127-18-4**
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 106 [2014] ; Monograph 63 [1995] ; Supplement 7 [1987] (Group 2A (probably carcinogenic to humans))
NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 3B (could be carcinogenic for man)
OSHA:	Present
NIOSH:	potential occupational carcinogen
1,1,1-Trichloroethane	**71-55-6**
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999] ; Supplement 7 [1987] ; Monograph 20 [1979] (Group 3 (not classifiable))
Propylene oxide	**75-56-9**
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 60 [1994] ; Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))
NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present
NIOSH:	potential occupational carcinogen
Trichloroethene	**79-01-6**
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 106 [2014] ; Monograph 63 [1995] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen

NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 1 (causes cancer in man)
OSHA:	Present
NIOSH:	potential occupational carcinogen

Germ Cell Mutagenicity

Methylene chloride, 1,1,1-trichloroethane, perchloroethylene, trichloroethylene, and 1,2-propylene oxide have demonstrated human effects of mutagenicity. Butylene oxide has demonstrated animal effects of mutagenicity.

Tumorigenic Data

No data available

Reproductive Effects

Available data characterizes components of this product as reproductive hazards. Methylene chloride, 1,1,1-trichloroethane, perchloroethylene, trichloroethylene, 1,2-propylene oxide, and butylene oxide have demonstrated animal effects of teratogenicity.

Specific Target Organ Effects - Single Exposure

Respiratory tract

Specific Target Organ Effects - Repeated Exposure

Lungs, liver, kidneys, heart, blood, central nervous system.

Aspiration Hazard

No data available.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing cardiovascular, liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Other Toxicological Information

No additional information is available.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Component Analysis - Ecotoxicity - Aquatic Toxicity

Methylene chloride	**75-09-2**
Fish:	LC50 96 h Pimephales promelas 140.8 - 277.8 mg/L [flow-through]; LC50 96 h Pimephales promelas 262 - 855 mg/L [static]; LC50 96 h Lepomis macrochirus 193 mg/L [static]; LC50 96 h Lepomis macrochirus 193 mg/L [flow-through]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA ; EC50 72 h Pseudokirchneriella subcapitata >500 mg/L EPA
Invertebrate:	EC50 48 h Daphnia magna 1532 - 1847 mg/L [Static] EPA ; EC50 48 h Daphnia magna 190 mg/L IUCLID
1,2-Butylene oxide	**106-88-7**
Algae:	EC50 72 h Desmodesmus subspicatus >500 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 69.8 mg/L IUCLID

Tetrachloroethylene	**127-18-4**
Fish:	LC50 96 h Pimephales promelas 12.4 - 14.4 mg/L [flow-through]; LC50 96 h Pimephales promelas 8.6 - 13.5 mg/L [static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oncorhynchus mykiss 4.73 - 5.27 mg/L [flow-through]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA
Invertebrate:	EC50 48 h Daphnia magna 6.1 - 9 mg/L [Static] EPA
1,1,1-Trichloroethane	**71-55-6**
Fish:	LC50 96 h Pimephales promelas 35.2 - 50.7 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 57 - 90 mg/L [static] (juvenile); LC50 96 h Cyprinus carpio 56 mg/L [flow-through]; LC50 96 h Poecilia reticulata 52.9 mg/L [flow-through]; LC50 96 h Poecilia reticulata 69.7 mg/L [static]; LC50 96 h Pimephales promelas 91 - 126 mg/L [static]; LC50 96 h Oncorhynchus mykiss 46 - 59 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA
Invertebrate:	LC50 48 h Daphnia magna >530 mg/L IUCLID ; EC50 48 h Daphnia magna 2384 mg/L IUCLID ; EC50 48 h Daphnia magna 9.7 - 12.8 mg/L [Static] EPA
Propylene oxide	**75-56-9**
Fish:	LC50 96 h Lepomis macrochirus 215 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 240 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 350 mg/L IUCLID
Trichloroethene	**79-01-6**
Fish:	LC50 96 h Pimephales promelas 31.4 - 71.8 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 39 - 54 mg/L [static]
Algae:	EC50 96 h Desmodesmus subspicatus 450 mg/L IUCLID ; EC50 96 h Pseudokirchneriella subcapitata 175 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 2.2 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulation Potential

No information available for the product.

Mobility in Soil

No information available for the product.

Other Adverse Effects

No additional information is available.

* * * Section 13 - Disposal Considerations * * *

Disposal Methods

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Clean Harbors regarding proper recycling or disposal. U080, U228, U226, U210. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product. If this product is used or spent prior to discard, the following waste code(s) may apply: F001 for degreasing and F002 for all other uses; D039.

* * * Section 14 - Transport Information * * *

US DOT Information:
Shipping Name: DICHLOROMETHANE
Hazard Class: 6.1
UN/NA #: UN1593
Packing Group: III
Required Label(s): 6.1

IATA Information:
Shipping Name: DICHLOROMETHANE
Hazard Class: 6.1
UN#: UN1593
Packing Group: III
Required Label(s): 6.1

IMDG Information:
Shipping Name: DICHLOROMETHANE
Hazard Class: 6.1
UN#: UN1593
Packing Group: III
Required Label(s): 6.1

TDG Information:
Shipping Name: DICHLOROMETHANE
Hazard Class: 6.1
UN#: UN1593
Packing Group: III
Required Label(s): 6.1

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Methylene chloride	**75-09-2**
IBC Code:	Category Y
1,2-Butylene oxide	**106-88-7**
IBC Code:	Category Y
Tetrachloroethylene	**127-18-4**

IBC Code:	Category Y
1,1,1-Trichloroethane	**71-55-6**
IBC Code:	Category Y
Propylene oxide	**75-56-9**
IBC Code:	Category Y
Trichloroethene	**79-01-6**
IBC Code:	Category Y

Further information
Emergency Response Guide Number: 160 Reference - North American Emergency Response Guidebook

* * * Section 15 - Regulatory Information * * *

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Methylene chloride	**75-09-2**
SARA 313:	0.1 % de minimis concentration
CERCLA:	1000 lb final RQ ; 454 kg final RQ
1,2-Butylene oxide	**106-88-7**
SARA 313:	0.1 % de minimis concentration
CERCLA:	100 lb final RQ ; 45.4 kg final RQ
Tetrachloroethylene	**127-18-4**
SARA 313:	0.1 % de minimis concentration
CERCLA:	100 lb final RQ ; 45.4 kg final RQ
1,1,1-Trichloroethane	**71-55-6**
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ ; 454 kg final RQ
Propylene oxide	**75-56-9**
SARA 302:	10000 lb TPQ
SARA 313:	0.1 % de minimis concentration
CERCLA:	100 lb final RQ ; 45.4 kg final RQ

SARA 304:	100 lb EPCRA RQ
Trichloroethene	**79-01-6**
SARA 313:	0.1 % de minimis concentration
CERCLA:	100 lb final RQ ; 45.4 kg final RQ
TSCA 12b:	Section 5 , 0.1 % de minimis concentration; Section 6 , 0.1 % de minimis concentration

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

Chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

CAS-No.	Name	Percent by Weight
75-09-2	Methylene chloride	95-100
106-88-7	1,2-Butylene oxide	0.1-0.2
127-18-4	Tetrachloroethylene	0-1
71-55-6	1,1,1-Trichloroethane	0-1
71-56-9	Propylene oxide	0-1
79-01-6	Trichloroethene	0-1

Tetrachloroethylene (127-18-4): After December 8, 2026 this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers for any use. After March 8, 2027, 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 PCE equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant/intermediate; (2) Processing into formulation, mixture or reaction product; (3) Processing by repackaging; (4) Recycling; (5) Industrial and commercial use as solvent in open-top batch vapor degreasing; (6) Industrial and commercial use as solvent in closed-loop batch vapor degreasing; (7) Industrial and commercial use in maskant for chemical milling; (8) Industrial and commercial use as a processing aid in catalyst regeneration in petrochemical manufacturing; (9) Industrial and commercial use as a processing aid in sectors other than petrochemical manufacturing; (10) Industrial and commercial use as solvent for cold cleaning of tanker vessels; (11) Industrial and commercial use as energized electrical cleaner; (12) Industrial and commercial use in laboratory chemicals; (13) Industrial and commercial use in solvent-based adhesives and sealants; (14) Industrial and commercial use in dry cleaning in 3rd generation machines until December 20, 2027; (15) Industrial and commercial use in all dry cleaning and related spot cleaning until December 19, 2034; (16) Export; and (17) Disposal.

Trichloroethylene (79-01-6): After June 16, 2025, this chemical/product is and can only be domestically manufactured, imported, processed, or distributed in commerce for the following purposes until the following prohibitions take effect: (1) Processing as an intermediate a) for the manufacture of HFC-134a until June 18, 2033, and b) for all other processing as a reactant/intermediate until December 18, 2026; (2) Industrial and commercial use as a solvent for open-top batch vapor degreasing until December 18, 2025; (3) Industrial and commercial use as a solvent for closed-loop batch vapor degreasing until December 18, 2025, except for industrial and commercial use in batch vapor degreasing for land-based DoD defense systems by Federal agencies and their contractors until December 18, 2029, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing necessary for rocket engine cleaning by Federal agencies and their contractors until December 18, 2031, and except for industrial and commercial use of TCE in closed-loop and open-top batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices until December 18, 2031, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing for rayon fabric scouring for end use in rocket booster nozzle production by Federal agencies and their contractors until December 18, 2034; (4) Industrial and commercial use in processing aid (a) for lithium battery separator manufacturing until December 18, 2029, and (b) for lead-acid battery separator manufacturing until December 18, 2044, and (c) for specialty polymeric microporous sheet material manufacturing until December 18, 2039, and (d) in process solvent used in battery manufacture; in process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; in extraction solvent used in caprolactam manufacture; and in precipitant used in beta-cyclodextrin manufacture until December 18, 2026; (5) Industrial and

commercial uses for vessels of the Armed Forces and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems until December 18, 2034; and (6) Industrial and commercial use for laboratory use (a) for essential laboratory activities until December 18, 2074 and (b) for asphalt testing and recovery using manual centrifuge processes until December 18, 2029 and for asphalt testing and recovery until December 18, 2034.

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Carcinogenicity; Reproductive Toxicity; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity; Germ Cell Mutagenicity

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Methylene chloride	**75-09-2**	Yes	Yes	Yes	Yes	Yes
1,2-Butylene oxide	**106-88-7**	No	Yes	Yes	Yes	Yes
Tetrachloroethylene	**127-18-4**	Yes	Yes	Yes	Yes	Yes
1,1,1-Trichloroethane	**71-55-6**	Yes	Yes	Yes	Yes	Yes
Propylene oxide	**75-56-9**	Yes	Yes	Yes	Yes	Yes
Trichloroethene	**79-01-6**	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)
Warning! This product can expose you to chemicals including Methylene chloride, Tetrachloroethylene, Propylene oxide, Trichloroethene, which are known to the State of California to cause cancer and Trichloroethene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Methylene chloride	**75-09-2**
Carc:	carcinogen , 4/1/1988
Tetrachloroethylene	**127-18-4**
Carc:	carcinogen , 4/1/1988
Propylene oxide	**75-56-9**
Carc:	carcinogen , 10/1/1988
Trichloroethene	**79-01-6**
Carc:	carcinogen , 4/1/1988
Repro/Dev. Tox	developmental toxicity , 1/31/2014
	male reproductive toxicity , 1/31/14

Component Analysis - Inventory
Methylene chloride (75-09-2)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2

Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA		MX	NZ	PH	TH-TECI	TW	VN (Draft)	
No		Yes	Yes	Yes	Yes	Yes	Yes	

1,2-Butylene oxide (106-88-7)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA		MX	NZ	PH	TH-TECI	TW	VN (Draft)	
No		Yes	Yes	Yes	No	Yes	Yes	

Tetrachloroethylene (127-18-4)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA		MX	NZ	PH	TH-TECI	TW	VN (Draft)	
Yes		Yes	Yes	Yes	Yes	Yes	Yes	

1,1,1-Trichloroethane (71-55-6)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA		MX	NZ	PH	TH-TECI	TW	VN (Draft)	
No		Yes	Yes	Yes	No	Yes	Yes	

Propylene oxide (75-56-9)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA		MX	NZ	PH	TH-TECI	TW	VN (Draft)	
Yes		Yes	Yes	Yes	Yes	Yes	Yes	

Trichloroethene (79-01-6)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA		MX	NZ	PH	TH-TECI	TW	VN (Draft)	

Yes	Yes	Yes	Yes	Yes	Yes	Yes

* * * Section 16 - Other Information * * *

NFPA Ratings: Health: 2 **Fire:** 1 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

02/18/2025: Revised to incorporate the downstream notification requirements for TCE in §751.321. Language entered in Sections 1 and 15.

Key/Legend

ACGIH - American Conference of Governmental Industrial Hygienists; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Disclaimer

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