

Safety Data Sheet

Methyl Alcohol (Methanol)

Section 1 - Chemical Product and Company Identification

SDS Name: Methyl Alcohol (Methanol)

Catalog Numbers: SO-372, A-110-1, E-310-5, F-14

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H225-Flammable liquids: 2

H301-Acute toxicity, oral: 3

H311-Acute toxicity, dermal: 3

H315-Skin corrosion/irritation: 2

H319-Serious eye damage/eye irritation: 2A

H331-Acute toxicity, inhalation: 3

H360-Reproductive toxicity: 1B

H370-Specific target organ toxicity, single exposure: 1

H372-Specific target organ toxicity, repeated exposure: 1

Pictograms or Hazard Symbols and Hazard Statement(s):



Signal Word: Danger

Hazard Statements:

H225-Highly flammable liquid and vapour

H301-Toxic if swallowed

H311-Toxic in contact with skin

H315-Causes skin irritation

H319-Causes serious eye irritation

H331-Toxic if inhaled
H360-May damage fertility or the unborn child
H370-Causes damage to organs (target organs: central nervous system and optic nerve)
H372-Causes damage to organs through prolonged or repeated exposure (target organs: kidney, liver, spleen, and blood)

Precautionary Statements:

P201-Obtain special instructions before use.
P202-Do not handle until all safety precautions have been read and understood.
P210-Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233-Keep container tightly closed.
P240-Ground and bond container and receiving equipment.
P241-Use explosion-proof electrical/ventilating/lighting equipment.
P242-Use non-sparking tools.
P243-Take action to prevent static discharges.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P270-Do not eat, drink, or smoke when using this product.
P271-Use only outdoors or in a well-ventilated area.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310-If swallowed: Immediately call a Poison Center/doctor.
P302+P352-If on skin: Wash with plenty of soap and water.
P303+P361+P353-If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340-If inhaled: Remove person to fresh air and keep comfortable for breathing.
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/doctor.
P308+P313-If exposed or concerned: Get medical advice/attention.
P311-Call a Poison Center/doctor.
P312-Call a Poison Center/doctor if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P330-Rinse mouth.
P332+P313-If skin irritation occurs: Get medical advice/attention.
P337+P313-If eye irritation persists: Get medical advice/attention.
P361+P364-Take off immediately all contaminated clothing and wash it before reuse.
P362+P364-Take off contaminated clothing and wash it before reuse.
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam to extinguish.
P403+P233-Store in a well-ventilated place. Keep container tightly closed.
P403+P235-Store in a well-ventilated place. Keep cool.
P405-Store locked up.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
67-56-1	Methyl Alcohol	100 v/v

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing/shoes before reuse.

Oral Exposure: If swallowed, seek immediate medical advice. Do not induce vomiting unless directed by a physician.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Immediate medical attention is required.

Section 5 - Fire Fighting Measures

General Information: Flammable liquid and vapor. Risk of ignition. Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

Extinguishing Media: For small fires use alcohol-resistant foam, dry chemical, or carbon dioxide. For large fires use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. Do NOT use water jet.

Hazardous Combustion Products: Carbon oxides, formaldehyde, irritating and toxic fumes and gases.

Flash Point: 11°C (51.8°F) Closed Cup

Autoignition Temperature: 464°C (867°F)

Explosion Limits, Lower: 6.0 vol %

Upper: 36 vol %

NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Note: Keep away from heat, sparks, or flames. Sensitive to static discharge.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment and NIOSH approved respirator. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Keep away from heat. Eliminate all sources of ignition. Take precautionary measures against static discharges.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Use with adequate ventilation. Store capped at room temperature in dry and well-ventilated place. Do not breath vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use under a chemical fume hood. Do not ingest. Keep away from direct sunlight, open flames, hot surfaces, and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges. Protect from heat. Keep away from incompatible materials. Vapors heavier than air, may travel considerable distance and ignite or explode.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm Skin STEL	200 ppm TWA 260 mg/m ³ TWA 250 ppm STEL 325 mg/m ³ STEL 6000 ppm IDLH	200 ppm TWA 260 mg/m ³ TWA

OSHA Vacated PELs: Methyl Alcohol: 200 ppm TWA; 260 mg/m³ TWA; 250 ppm STEL; 325 mg/m³ Skin STEL

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear, colorless

Odor: Alcohol-like

Vapor Pressure: 97 mm Hg at 20°C (68°F)

Odor Threshold: Not available

Vapor Density: 1.1 (Air=1)

pH: Not available

Relative Density: 0.791 g/mL at 25°C (77°F)

Melting point/freezing point: -98°C (-144°F)

Solubility: Miscible in water

Boiling Point: 64.5°C (147°F)

Flash Point: 11°C (51.8°F) Closed Cup

Evaporation Rate: 5.9 (BuAC=1)

Flammability (solid, gas): Not applicable

Partition coefficient: n-octanol/water: log Pow: -0.77

Autoignition Temperature: 464°C (867°F)

Decomposition Temperature: Not available

Viscosity: 0.55 at 20°C (68°F), centipoises

Specific Gravity/Density: 0.791 g/mL at 25°C (77°F)

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Note: Vapors may form explosive mixtures with air.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, hot surfaces. Do not allow vapors to accumulate.

Incompatibilities with Other Materials: Oxidizing agents, metals, acids (including sulfuric acid, nitric acid, perchloric acid, permanganic acid), alkali metals, chloroform, chlorates, nitrates, perchlorates, acid anhydrides, acid halides, strong bases, peroxides (including hydrogen peroxide), alkaline earth metals, reducing agents, sodium hypochlorite, calcium hypochlorite, oxyhalogenic acid salts, chromium(VI) oxide, halogen oxides, nitrogen oxides, hydrides, halogens, tetrachloromethane, phosphorous oxides, various plastics, rubber, various coatings.

Note: May react with metals to produce dangerous Hydrogen gas.

Hazardous Decomposition Products: Carbon oxides, formaldehyde, irritating and toxic fumes and gases.

Section 11 - Toxicological Information
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CAS#67-56-1 Methyl Alcohol: RTECS#: PC1400000

LD50 Oral: 100.1 mg/kg (expert judgement)

LD50 Dermal: 300.1 mg/kg (expert judgement)

LC50 Inhalation: 3.1 mg/L 4h vapor (expert judgement)

Investigated as a mutagen, reproductive effector.

Draize test, rabbit, eye: 100 mg/24h Moderate Irritant.

Draize test, rabbit, skin: 20 mg/24h Moderate Irritant.

Carcinogenicity: Methyl Alcohol CAS#67-56-1 is not listed by IARC, NTP, ACGIH, or OSHA. Methyl Alcohol is listed by California Prop. 65 as a developmental carcinogen.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.

Teratogenicity: Not available

Reproductive Effects: Experiments have shown fetotoxicity, specific developmental abnormalities, and other adverse reproductive effects.

Neurotoxicity: Not available.

Mutagenicity: Not available.

Specific Target Organ Toxicity, Single Exposure: Central nervous system and optic nerve.

Specific Target Organ Toxicity, Repeated Exposure: Kidney, liver, spleen, and blood.

Symptoms associated with overexposure:

Toxic if inhaled. Toxic if swallowed. Toxic in contact with skin. Exposure causes damage to organs (including CNS, optic nerve, kidney, liver, spleen, blood). Causes serious eye irritation which may include pain, watering, redness, blurred vision. May cause eye lesions and blindness. Once absorbed into the body, it is very slowly eliminated. A person may get better but then worse again up to 30 hours later. Overexposure may cause headache, dizziness, tiredness, nausea, vomiting, coughing, respiratory tract irritation, fatigue, stomach irregularities, blindness, coma, death. Skin contact may cause irritation, redness, dryness, cracking. Skin absorption may occur. Ingestion can intoxicate and cause blindness. Exposure may damage fertility or the unborn child.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains.

CAS# 67-56-1 Methyl Alcohol:

LC50, freshwater fish: 15400 mg/L 96h flow-through (*lepomis macrochirus*)(bluegill)

LC50, freshwater fish: 19000 mg/L 96h (*oncorhynchus mykiss*)(rainbow trout)

EC50, water flea: 18260 mg/L 96h semi-static (*daphnia magna*)

ErC50, algae: 22000 mg/L 96h static (*pseudokirchneriella subcapitata*)(green algae)

IC50, bacteria: >1000 mg/L 3h (activated sludge)

Persistence and degradability: Persistence is unlikely based on available information.

Bio-accumulative potential: Not available.

Mobility: Will likely be mobile in the environment due to its volatility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 - Transport Information

DOT

Proper shipping name: Methanol

UN1230

PG II

Hazard class 3 (flammable)

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 2/2/12

Revision #1: 12/2/14 RC

Revision #2: 4-2-19

Revision #3: 8-14-19

Revision #4: 12-10-21

Revision #5: 6-20-23

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