

Material Safety Data Sheet
Version 5.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methanol
Supplier : Absolute Standards Inc.
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USA
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2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant

Target Organs

Eyes, Kidney, Liver, Heart, Central nervous systemEyes, Kidney, Liver, Heart, Central nervous system

GHS Classification

Flammable liquids (Category 2)

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Dermal (Category 3)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 1)

GHS Label elements, including precautionary statements

Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H301 + H311 Toxic if swallowed or in contact with skin

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H370 Causes damage to organs.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 2

Chronic Health Hazard: *

Flammability: 3

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 3

Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.

Skin Toxic if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Ingestion Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Methyl alcohol

Formula : CH₄O

Molecular Weight : 32.04 g/mol

Methanol

CAS-No. 67-56-1

EC-No. 200-659-6

Index-No. 603-001-00-X

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Methanol 67-56-1 TWA 200 ppm

Skin notation TWA 200 ppm

Potential for dermal absorption

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Immersion protection

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: > 480 min

Material tested: Butoject® (Aldrich Z677647, Size M)

Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: > 30 min

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form liquid

Colour colourless

Safety data

pH no data available

Melting point/range: -98 °C (-144 °F)

Boiling point 64.7 °C (148.5 °F)

Flash point 11.0 °C (51.8 °F) - closed cup

Ignition temperature 455 °C (851 °F)

Autoignition temperature 455.0 °C (851.0 °F)

Lower explosion limit 6 %(V)

Upper explosion limit 36 %(V)

Vapour pressure 546.6 hPa (410.0 mmHg) at 50.0 °C (122.0 °F)

130.3 hPa (97.7 mmHg) at 20.0 °C (68.0 °F)

Density 0.791 g/mL at 25 °C (77 °F)

Water solubility completely miscible

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

Relative vapour density no data available

Odour no data available

Odour Threshold no data available

Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid

Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - rat - 5,628 mg/kg

Inhalation LC50

LC50 Inhalation - rat - 4 h - 64000 ppm

LC50 Inhalation - rat - 4 h - 87.6 mg/l

Dermal LD50

LD50 Dermal - rabbit - 15,800 mg/kg

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit - No skin irritation

Serious eye damage/eye irritation

Eyes - rabbit - No eye irritation

Respiratory or skin sensitization

guinea pig - OECD Test Guideline 406 - Does not cause skin sensitization.

Germ cell mutagenicity no data available

Genotoxicity in vitro - Non-mammalian - Other cell types - negative

Genotoxicity in vivo - mouse - male and female - Intraperitoneal - negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity no data available

Teratogenicity no data available

Specific target organ toxicity - single exposure (Globally Harmonized System) Causes damage to organs.

Specific target organ toxicity - repeated exposure (Globally Harmonized System) no data available

Aspiration hazard no data available

Potential health effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.

Ingestion Toxic if swallowed.

Skin Toxic if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Signs and Symptoms of Exposure

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made non-poisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion., Drowsiness, Unconsciousness, May cause convulsions.

Synergistic effects no data available

Additional Information

Repeated dose toxicity - Monkey - Gavage - 72 h - Lowest observed adverse effect level - 2,340 mg/kg

RTECS: PC1400000

12. ECOLOGICAL INFORMATION

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 19,000.00 mg/l - 96 h

mortality LC50 - Lepomis macrochirus (Bluegill) - 15,400 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 24,500.00 mg/l - 48 h
EC100 - Daphnia magna (Water flea) - 10,000.00 mg/l - 24 h
Toxicity to algae Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000 mg/l - 96 h
Persistence and degradability
Biodegradability aerobic
Result: 72 % - rapidly biodegradable
Bioaccumulative potential
Bioaccumulation Cyprinus carpio (Carp) - 72 d at 20 °C
Bioconcentration factor (BCF): 1.0
Mobility in soil Will not adsorb on soil.
PBT and vPvB assessment no data available
Other adverse effects no data available

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1230 Class: 3 Packing group: II

Proper shipping name: Methanol

Reportable Quantity (RQ): 5000 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D

Proper shipping name: METHANOL

Marine pollutant: No

IATA

UN number: 1230 Class: 3 (6.1) Packing group: II

Proper shipping name: Methanol

15. REGULATORY INFORMATION

OSHA Hazards

Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Methanol

CAS-No. 67-56-1 Revision Date 7/1/07

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Methanol

CAS-No. 67-56-1 Revision Date 7/1/07

Pennsylvania Right To Know Components

Methanol

CAS-No. 67-56-1 Revision Date 7/1/07

New Jersey Right To Know Components

Methanol

CAS-No. 67-56-1 Revision Date 7/1/07

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other

reproductive harm.

16. OTHER INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian Workplace Hazardous Materials Information System. This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC. DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Material Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.