# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

| | |
|---|---|
| Product name: | Methanol |
| CAS number: | 67-56-1 |
| Synonyms: | Methyl Alcohol |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses : Laboratory chemicals, Synthesis of substances

### 1.3 Details of the supplier of the safety data sheet

Company : Lab Alley, LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
U.S.A.

Telephone : 512-668-9918
Fax : 512-886-4008

### 1.4 Emergency telephone

**Emergency Phone #** : US & Canada: 1-800-535-5053 INFOTRAC
International 1-352-323-3500 INFOTRAC

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2)
Acute toxicity, inhalation (Category 3)
Serious eye damage/eye irritation (Category 2)
Reproductive toxicity (Category 1B)
Specific target organ toxicity, single exposure (Category 1)
Specific target organ toxicity, single exposure (Category 3) Narcotic effects

## 2.2 GHS Label elements, including precautionary statements

Pictogram:

Signal Word: **Danger**

Hazard statement(s): Highly flammable liquid and vapor. Causes serious eye irritation. Toxic if inhaled. May cause drowsiness or dizziness. May damage fertility or the unborn child. Causes damage to organs.

Precautionary statement(s): **Prevention** - Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/ lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. **Repsonse** - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Dispose of contents/ container in accordance with local/regional/national/international regulations.

### Hazards not otherwise classified

Static accumulating flammable liquid can become electrostatically charged even in bonded and ground equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

# SECTION 3: Composition/information on ingredients

## 3.1 Components

| Ingredient | CAS Number | Percent | Hazardous Chemical |
|---|---|---|---|
| Methanol | 67-56-1 | 100 | Yes |

# SECTION 4: First aid measures

## 4.1 Description of first-aid measures

**General advice:** Take off all contaminated clothing immediately. If exposed or concerned: Get medical advice/attention. While flushing, remove clothes which do no adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim ware. Keep victim under observation. Symptoms may be delayed.

**If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician if you feel unwell.

| | |
|---|---|
| **In case of eye contact:** | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **In case of skin contact:** | Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse. |
| **In case of ingestion:** | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

### 4.2 Most important symptoms and effects, both acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### 4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

| | |
|---|---|
| **Suitable (and unsuitable) extinguishing media** | Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide ($CO_2$), sand or earth may be used for small fires only. Do not use water jet as an extinguisher, as this will spread the fire. |

### 5.2 Specific hazards arising from the substance or mixture

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

### 5.3 Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Use standard firefighting procedures and consider the hazards of other involved materials.. Highly flammable liquid and vapor.

### 5.4 Further information

None.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### 6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 6.3 Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

## 6.4 Reference to other sections

For disposal see Section 13. Refer to section 8 of SDS for personal protection details.

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe
mist/vapors. Avoid contact with eyes. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1 ), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

### Hygiene measures

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

# SECTION 8. Exposure controls/personal protection

## 8.1 Occupational exposure limits

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Material | Type | Value |
|---|---|---|
| Methanol (CAS 67-65-1) | PEL | 260 mg/m3 |
| | | 200 ppm |

**US. ACGIH Threshold Limit Values**

| Material | Type | Value |
|---|---|---|
| Methanol (CAS 67-65-1) | STEL | 250 ppm |

**US. ACGIH Threshold Limit Values (TLV)**

| Material | Type | Value |
|---|---|---|
| Methanol (CAS 67-65-1) | TWA | 200 ppm |

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

| Material | Type | Value |
|---|---|---|
| Methanol (CAS 67-65-1) | IDLH | 6% |
| | | 6000 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)**

| Material | Type | Value |
|---|---|---|
| Methanol (CAS 67-65-1) | STEL | 325 mg/m3 |
| | | 250 ppm |
| | TWA | 260 mg/m3 |
| | | 200 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| (BEi) Material | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Methanol (CAS 67-56-1) | 15 mg/l | Methanol | Urine | |

* - For sampling details, please see the source document. **Exposure guidelines**

**US - California OELs: Skin designation**
Methanol (CAS 67-56-1) — Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**
Methanol (CAS 67-56-1) — Skin designation applies.

**US - Tennessee OELs: Skin designation**
Methanol (CAS 67-56-1) — Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**
Methanol (CAS 67-56-1) — Danger of cutaneous absorption

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**
Methanol (CAS 67-56-1) — Can be absorbed through the skin.

## 8.2 Exposure controls

### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

### Personal protective equipment

#### Eye/face protection

Chemical respirator with organic vapor cartridge and full facepiece.

#### Skin and body protection

Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wear appropriate thermal protective clothing, when necessary.

### Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

### Control of environmental exposure

Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Physical State** | Liquid. |
| **Appearance** | Colorless. |
| **Odor** | Pungent. |
| **Odor Thresh** | Not available. |
| **pH** | Not available. |
| **Melting Point/Range** | -144 °F (-97.78 °C) |
| **Boiling Point/Range** | 148.46 °F (64.7 °C) 1013.1 hPa |
| **Flash Point** | 53.0 °F (11.7 °C) |
| **Evaporation Rate** | Not available. |
| **Flammability (solid, gas)** | Not applicable. |
| **Flammability or explosive limit** | |
| **Upper** | : 36.5% v/v |
| **Lower** | : 7.3% v/v |
| **Vapor Pressure** | 16.93 kPa at 25 °C (77 °F (25 °C)) |
| **Vapor Density** | 1.11 |
| **Density** | Not available. |
| **Solubility** | Miscible. |
| **Partition coefficient; n-octanol/water** | -0.77 |
| **Autoignition Temp** | 867.2 °F (464 °C) |
| **Decomposition Temp** | Not available. |
| **Viscosity** | Not available. |
| **Molecular Formula** | C-H4-0 |
| **Molecular Weight** | 32.04 g/mol |
| **VOC Content(%)** | 100% EPA estimated |
| **Oxidizing properties** | Not oxidizing. |

### 9.2 Other safety information

None.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

## 10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

## 10.5 Incompatible materials

Strong oxidizing agents.

## 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity** Toxic if inhaled.

| Product | Species | Test Results |
|---|---|---|
| Methanol (CAS) 67-56-1) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | 15800 mg/kg |
| **Oral** | | |
| LD50 | Rat | 5628 mg/kg |

**Skin corrosion/irritation**

Due to partial or complete lack of data the classification is not possible.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Respiratory or skin sensitization**

Due to partial or complete lack of data the classification is not possible.

**Germ cell mutagenicity**

Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity**

Due to partial or complete lack of data the classification is not possible.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**NTP Report on Carcinogens**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Reproductive toxicity**

May damage fertility or the unborn child.

**Aspiration hazard**

Due to partial or complete lack of data the classification is not possible.

## 11.2 Additional information

Toxic if inhaled. May cause damage to organs by inhalation. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

# SECTION 12. Ecological information

## 12.1 Toxicity

**Ecotoxicity:** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Product | | Species | Test Results |
|---|---|---|---|
| Methanol (CAS 67-56-1) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | >10000 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | > 100 mg/l, 96 hours |

## 12.2 Persistence and Degradability

No data is available on the degradability of this substance.

## 12.3 Bioaccumulative Potential

Partition coefficient n-octanol / water (log Kow): - 0.77

## 12.4 Mobility in Soil

This product is miscible in water and may not disperse in soil.

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Endocrine disrupting properties

No data available.

## 12.7 Other adverse effects

The product contains volatile organic compounds which have a photochemical ozone creation potential.

# SECTION 13. Disposal considerations

## 13.1 Waste Disposal Methods

Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/ regional/national/international regulations. Hazardous waste code - D001: Waste Flammable material with a flash point <140 F. The waste code should be assigned in discussion between the user, the producer and the waste disposal company. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14: Transport information

| | |
|---|---|
| **DOT** | UN1230<br>Methanol<br>3<br>II |
| **IATA** | UN1230<br>Methanol<br>3<br>II |
| **IMDG** | UN1230<br>Methanol<br>3<br>II |

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Methanol (CAS 67-56-1) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories**
Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Hazard not otherwise classified (HNOC)

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | ¾bywt. |
|---|---|---|
| Methanol | 67-56-1 | 100 |

**US state regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Methanol (CAS 67-56-1)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Listed.

**US state regulations**

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Methanol (CAS 67-56-1)

**California Proposition 65**

**WARNING:** This product can expose you to Methanol, 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.

**California Proposition 65 - CRT: Listed date/Developmental toxin**

Methanol (CAS 67-56-1) Listed: March 16, 2012

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

## SECTION 16: Other information

Issue Date 07/14/2023
Revision Date 09/15/2023

**Disclaimer:**
The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.