



Health	2
Fire	3
Reactivity	0
Personal Protection	H

# Material Safety Data Sheet

## Methylal MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Methylal

**Catalog Codes:** SLM4000

**CAS#:** 109-87-5

**RTECS:** Not available.

**TSCA:** TSCA 8(b) inventory: Methylal

**CI#:** Not available.

**Synonym:** Dimethoxymethane

**Chemical Name:** Methylal

**Chemical Formula:** C3-H8-O2

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Methylal	109-87-5	100

**Toxicological Data on Ingredients:** Methylal: VAPOR (LC50): Acute: 24226.4 ppm 4 hour(s) [Mouse].

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of ingestion.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Non-mutagenic for mammals. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to upper respiratory tract, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

**Skin Contact:**

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

### Section 5: Fire and Explosion Data

**Flammability of the Product:** Flammable.

**Auto-Ignition Temperature:** 237°C (458.6°F)

**Flash Points:** CLOSED CUP: -32°C (-25.6°F). OPEN CUP: 0.4°C (32.7°F).

**Flammable Limits:** LOWER: 1.6% UPPER: 17.6%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal.

**Large Spill:**

Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

### Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, acids.

**Storage:**

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:**

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:**

United States: TWA: 1000 (ppm) from ACGIH (TLV) [1998] Australia: TWA: 1000 (ppm) Israel: TWA: 1000 (ppm) Mexico: TWA: 1000 (ppm) Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** chloroform like odor

**Taste:** Not available.

**Molecular Weight:** 76.1 g/mole

**Color:** Colorless.

**pH (1% soln/water):** Not available.

**Boiling Point:** 41.5°C (106.7°F)

**Melting Point:** -104.8°C (-156.6°F)

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapor Pressure:** 330 mm of Hg (@ 20°C)

**Vapor Density:** 2.6 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:**

Very slightly dispersed in hot water. Is not dispersed in cold water.

**Solubility:**

Partially soluble in hot water. Very slightly soluble in cold water.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Reactive with oxidizing agents, acids.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Not available.

### Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact. Inhalation.

**Toxicity to Animals:**

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute toxicity of the vapor (LC50): 24226.4 ppm 4 hour(s) [Mouse].

**Chronic Effects on Humans:**

MUTAGENIC EFFECTS: Non-mutagenic for mammals. The substance is toxic to upper respiratory tract, skin, eyes, central nervous system (CNS).

**Other Toxic Effects on Humans:**

Hazardous in case of skin contact (irritant, sensitizer), of inhalation (lung irritant). Slightly hazardous in case of ingestion.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

### Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:** Class 3: Flammable liquid.

**Identification:** : Methylal : UN1234 PG: II

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

### Federal and State Regulations:

Rhode Island RTK hazardous substances: Methylal Pennsylvania RTK: Methylal Florida: Methylal Massachusetts RTK: Methylal New Jersey: Methylal TSCA 8(b) inventory: Methylal TSCA 8(d) H and S data reporting: Methylal: June 1, 1987

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

### Other Classifications:

**WHMIS (Canada):** CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

### DSCL (EEC):

R11- Highly flammable. R36/37/38- Irritating to eyes, respiratory system and skin. R43- May cause sensitization by skin contact.

### HMIS (U.S.A.):

**Health Hazard:** 2

**Fire Hazard:** 3

**Reactivity:** 0

**Personal Protection:** h

### National Fire Protection Association (U.S.A.):

**Health:** 2

**Flammability:** 3

**Reactivity:** 2

**Specific hazard:**

### Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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