Safety Data Sheet · OSHA HCS 2024

Methanol ACS Reagent Grade

ACS Reagent

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Methanol ACS Reagent Grade
Grade	ACS Reagent
CAS Number	67-56-1
Chemical Formula	CH3OH
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Methyl alcohol; wood alcohol; carbinol; MeOH
Recommended Use	Laboratory and analytical solvent (ACS reagent): extraction, chromatography and sample preparation.
Restrictions on Use	Toxic: small amounts swallowed can cause permanent blindness or death, and methanol is also absorbed through the skin and by inhalation. Never use as a substitute for ethanol or in anything that could be drunk. For industrial, professional and laboratory use.

2 Hazard Identification



Flammable



Acute toxicity



Health hazard

Classification

Flammable liquids, Category 2

Acute toxicity (oral), Category 3

Acute toxicity (dermal), Category 3

Acute toxicity (inhalation), Category 3

Specific target organ toxicity, single exposure, Category 1

Signal Word

Danger

Hazard Statements

H225 Highly flammable liquid and vapor

H301 Toxic if swallowed

H311 Toxic in contact with skin

H331 Toxic if inhaled

H370 Causes damage to organs

Precautionary Statements

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, and lighting equipment.
P242 Use non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust, fume, gas, mist, vapors or spray.
P264 Wash hands and face 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, and eye/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P307+P311 IF exposed: Call a POISON CENTER or doctor.
P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
P311 Call a POISON CENTER or doctor.
P312 Call a POISON CENTER or doctor if you feel unwell.
P321 Specific treatment (see first-aid information on this label).
P330 Rinse mouth.
P361 Take off immediately all contaminated clothing.
P370+P378 In case of fire: Use alcohol-resistant foam, CO2 or dry chemical powder 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 and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Methanol	67-56-1	CH4O	>=99.8% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects	Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning. Absorption through the skin may cause systemic poisoning. Inhalation may cause coughing, shortness of breath and headache; high concentrations may cause systemic poisoning. A single exposure may damage organs.
Immediate Medical Attention and Special Treatment	Get immediate medical attention after any significant exposure; symptoms may be delayed.

5 Fire-Fighting Measures

Suitable Extinguishing Media	Alcohol-resistant foam, CO2, dry chemical powder. Water spray may be used to cool fire-exposed containers.
Unsuitable Extinguishing Media	Do not use a solid water stream — may scatter and spread fire.
Specific Hazards Arising from the Chemical	Vapors are heavier than air and may form explosive mixtures with air; they can travel to a source of ignition and flash back. Containers may rupture when heated.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products	Carbon monoxide, carbon dioxide and formaldehyde.

6 Accidental Release Measures

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Hazard-Specific Precautions	Eliminate all ignition sources. Use non-sparking tools and explosion-proof equipment; ground and bond containers during cleanup.
Environmental Precautions	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area away from heat, sparks, and open flame. Keep away from incompatible materials (see Section 10). Keep containers tightly closed. Ground and bond containers when transferring material.
Specific Storage Precautions	Keep containers tightly closed in a cool, dry, well-ventilated flammables area away from heat, sparks, open flame and direct sunlight. Store locked up. Ground and bond containers when transferring.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value

Limit	Value
OSHA PEL	200 ppm TWA
ACGIH TLV	200 ppm TWA / 250 ppm STEL (skin notation)
NIOSH REL	200 ppm TWA / 250 ppm STEL
IDLH	6000 ppm
Other Limits	NIOSH IDLH 6000 ppm

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use a NIOSH-approved respirator with organic vapor cartridges. For confined spaces or exposures above the OEL, use supplied-air respiratory protection.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Volatile clear liquid, transparent
Odor	Mild alcohol odor (gives no reliable warning of overexposure)
Odor Threshold	No data available
pH	No data available
Melting Point / Freezing Point	-98 °C (-144 °F)
Boiling Point	64.7 °C (148.5 °F) at 760 mmHg
Flash Point	10–11 °C (50–52 °F), closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 6.0% / UEL 36% (v/v in air)
Vapor Pressure	128 hPa (96 mmHg) at 20 °C
Vapor Density	1.1 (air = 1)
Relative Density	0.791–0.793 at 20 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	Not applicable
Form	Liquid
Density	0.792 g/cm^3 at 68 °F (USCG, 1999)

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, static discharge and other ignition sources. Methanol burns with a nearly invisible flame in daylight.
Incompatible Materials	Strong oxidizing agents and peroxides; strong acids, acid anhydrides and acid chlorides; strong bases; alkali metals; aluminum, zinc and lead (corroded, especially by dry methanol).
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide and formaldehyde.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning. Absorption through the skin may cause systemic poisoning. Inhalation may cause coughing, shortness of breath and headache; high concentrations may cause systemic poisoning. A single exposure may damage organs.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LD50 Oral	1,187–6,200 mg/kg (rat). Humans are far more sensitive: classification ATE 100 mg/kg (H301).
LD50 Dermal	15,840–17,100 mg/kg (rabbit); classification ATE 300 mg/kg (H311)
LC50 Inhalation	64,000 ppm (rat); classification ATE 3 mg/L vapor (H331)

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Algae ErC50: ~ 22000 mg/L (96 h, Selenastrum capricornutum (96-h EC50)); Daphnia EC50: > 10000 mg/L (48 h, Daphnia magna); Fish LC50: 28100 mg/L (96 h, Pimephales promelas); Fish LC50: 15400 mg/L (96 h, Lepomis macrochirus)
Persistence & Degradability	Not persistent — Readily biodegradable (84–95%)

Bioaccumulative Potential	log Kow −0.77 (20 °C), BCF <10 (not bioaccumulative)
Mobility in Soil	Very high mobility in soil

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	U154 (discarded unused methanol, 40 CFR 261.33(f)); F003 (spent non-halogenated solvent, 40 CFR 261.31); D001 (ignitable).

If discarded, this material may be an ignitable hazardous waste (EPA RCRA D001, 40 CFR 261.21(a)(1): flash point below 60 °C; aqueous solutions with less than 24% alcohol by volume are excluded). The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN1230
Proper Shipping Name	Methanol
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	II

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Listed (since 2012-03-16)
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Listed
CERCLA Reportable Quantity (RQ)	Methanol (CAS 67-56-1) 5,000 lb (2,270 kg), about 760 US gal. EPCRA Section 313 (TRI) listed, de minimis 1.0%.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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