Safety Data Sheet · OSHA HCS 2024

Methyl Ethyl Ketone (MEK) ACS Grade

ACS Grade

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-19	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Methyl Ethyl Ketone (MEK) ACS Grade
Grade	ACS Grade
CAS Number	78-93-3
Chemical Formula	C4H8O
Molecular Weight	72.11 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	2-Butanone; butan-2-one; ethyl methyl ketone; MEK
Recommended Use	Laboratory and analytical solvent (ACS grade); extraction; coatings and resin research.
Restrictions on Use	For industrial and professional use. Not for use in food, drug or cosmetic products.

2 Hazard Identification



Flammable



Irritant / harmful

Classification

Flammable liquids, Category 2

Serious eye damage/eye irritation, Category 2A

Specific target organ toxicity, single exposure, Category 3 (narcotic effects)

Signal Word

Danger

Hazard Statements

H225 Highly flammable liquid and vapor

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness

EUH066 Repeated exposure may cause skin dryness or cracking

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.

P261 Avoid breathing dust, fume, gas, mist, vapors or spray.

P264 Wash hands and face thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves, protective clothing, and eye/face protection.

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.

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

P312 Call a POISON CENTER or doctor if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice or attention.

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
Methyl Ethyl Ketone	78-93-3	C4H8O	>99% (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

Eye contact causes irritation: redness, pain and tearing.

Repeated exposure may cause skin dryness or cracking.

Inhalation of vapors may cause drowsiness, dizziness, headache and nausea.

Immediate Medical Attention and Special Treatment

Treat symptomatically. Get medical attention if symptoms develop or persist.

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 and carbon dioxide.

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 and open flame. Hygroscopic: protect from moist air. Keep away from oxidizers. Ground and bond containers when transferring.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	200 ppm TWA
ACGIH TLV	200 ppm TWA / 300 ppm STEL
NIOSH REL	200 ppm TWA / 300 ppm STEL
IDLH	3000 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, colorless, mobile
Odor	Characteristic sweet, acetone-like odor
Odor Threshold	No data available
pH	No data available
Melting Point / Freezing Point	-86 °C (-123 °F)
Boiling Point	79.6 °C (175.3 °F) at 760 mmHg
Flash Point	-9 to -6 °C (16 to 21 °F), closed cup
Evaporation Rate	3.7 (n-butyl acetate = 1)
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 1.4–1.8% / UEL 11.4–11.5% (v/v in air)
Vapor Pressure	78 mmHg (10.5 kPa) at 20 °C
Vapor Density	2.41–2.5 (air = 1)
Relative Density	0.805–0.806 at 20 °C (water = 1)
Solubility	290 g/L in water at 20 °C (partly miscible)
Partition Coefficient (n-octanol/water)	log Kow 0.29–0.3
Auto-ignition Temperature	404 °C (759 °F)
Decomposition Temperature	No data available
Viscosity	0.40–0.42 mPa·s at 15–20 °C
Particle Characteristics	Not applicable
Form	Liquid
Density	0.806 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 and other ignition sources; exposure to moist air or water; prolonged storage exposed to air (the product may form explosive peroxides).
Incompatible Materials	Strong oxidizing agents, including hydrogen peroxide and nitric acid (violent reaction); strong acids such as sulfuric acid; strong bases and caustics; strong reducing agents; ammonia and amines; chloroform; copper. Attacks many plastics, resins and rubber.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Eye contact causes irritation: redness, pain and tearing. Repeated exposure may cause skin dryness or cracking. Inhalation of vapors may cause drowsiness, dizziness, headache and nausea.
Delayed and Chronic Effects	Repeated skin contact may cause dermatitis (dry, cracked skin).

Route	Value
LD50 Oral (rat)	2054–2737 mg/kg
LD50 Dermal (rabbit)	6480 mg/kg
LC50 Inhalation (rat, 4h)	11700 ppm

Carcinogen Classification

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

12 Ecological Information

Ecotoxicity	Daphnia EC50: < 520 mg/L (48 h, Daphnia magna (pH 8, hardness 173)); Fish LC50: 4600 mg/L (48 h, Leuciscus idus (golden orfe; static); 48-h window)
Persistence & Degradability	Readily biodegradable (76–89% ThOD in 5–20 d)
Bioaccumulative Potential	log Kow 0.29, BCF 3 (estimated; low)
Mobility in Soil	Very high mobility in soil (Koc 29–34)

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	U159 (discarded unused product, 40 CFR 261.33(f)); D035 (toxicity characteristic, 200.0 mg/L); F005 (spent solvent, 40 CFR 261.31)

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	UN1193
Proper Shipping Name	Ethyl methyl ketone or methyl ethyl ketone
Hazard Class	3
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	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed
CERCLA Reportable Quantity (RQ)	Methyl ethyl ketone (2-butanone, CAS 78-93-3) 5,000 lb (2,270 kg), about 740 US gal. Not an EPCRA section 313 (TRI) chemical.

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	2026-11-19
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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