Safety Data Sheet · OSHA HCS 2024

Methyl n-Amyl Ketone (MNAK) ACS Grade

ACS Grade

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

1 Identification

Product Identifier	Methyl n-Amyl Ketone (MNAK) ACS Grade
Grade	ACS Grade
CAS Number	110-43-0
Molecular Weight	114.19 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	2-Heptanone; heptan-2-one; methyl pentyl ketone; MAK
Recommended Use	Laboratory and analytical solvent (ACS grade); synthesis intermediate.
Restrictions on Use	Not for food, drug or household use. Flammable and harmful if inhaled: use with adequate ventilation, away from ignition sources.

2 Hazard Identification



Flammable



Irritant / harmful

Classification	Flammable liquids, Category 3 Acute toxicity (oral), Category 4 Acute toxicity (inhalation), Category 4 Specific target organ toxicity, single exposure, Category 3 (narcotic effects)
Signal Word	**Warning**
Hazard Statements	H226 Flammable liquid and vapor H302 Harmful if swallowed H332 Harmful if inhaled H336 May cause drowsiness or dizziness

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.

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+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

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.

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

P313 Get medical advice or attention.

P330 Rinse mouth.

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 n-Amyl Ketone	110-43-0	C7H14O	>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

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

Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning.

Inhalation may cause coughing, shortness of breath and headache; high concentrations may cause systemic poisoning.

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 on combustion.

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 tightly closed in a cool, well-ventilated flammables area away from ignition sources and oxidizers. Store locked up. Ground and bond containers.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	100 ppm TWA
ACGIH TLV	50 ppm TWA
NIOSH REL	100 ppm (465 mg/m^3) TWA
IDLH	800 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	Clear, colorless liquid
Odor	Sweet, fruity ketone odor
Odor Threshold	About 0.2 ppm
pH	No data available
Melting Point / Freezing Point	-35 °C (-31 °F)
Boiling Point	149–152 °C (300–306 °F)
Flash Point	39–41 °C (102–106 °F), closed cup
Evaporation Rate	0.34 (n-butyl acetate = 1)
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 1.1% / UEL 7.9% (v/v in air)
Vapor Pressure	2.1–2.8 mmHg at 20–25 °C
Vapor Density	3.9 (air = 1)
Relative Density	0.81–0.82 at 20–25 °C (water = 1)
Solubility	Slightly soluble in water (about 4.3 g/L at 20 °C); miscible with most organic solvents
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	393 °C (740 °F)
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	Not applicable
Form	Liquid
Density	0.813-0.816 g/ml at 20 °C
Refractive Index	1.405-1.409

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.
Incompatible Materials	Strong oxidizing agents; strong acids.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide on combustion.

11 Toxicological Information

See below for route-specific acute toxicity data.

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

Route	Value
LD50 Oral	1,600–1,670 mg/kg (rat), the basis for H302
LD50 Dermal	> 2,000 mg/kg (rat); 12.6 mL/kg (rabbit)
LC50 Inhalation	> 16.7 mg/L (rat, 4 h); 2,000–4,000 ppm (rat, 6 h)

Carcinogen Classification

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

12 Ecological Information

Ecotoxicity	Fish LC50: 131 mg/L (96 h, Pimephales promelas (flow-through, measured, 24.2 °C; 95% CL 126–137 mg/L))
Persistence & Degradability	Likely to biodegrade (aerobic, aquatic)
Bioaccumulative Potential	log Kow 1.98, BCF 7 (estimated; low)
Mobility in Soil	Moderate soil mobility (estimated Koc 280)

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	D001 (ignitable). 2-Heptanone is not a P-, U- or F-listed waste.

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	UN1110
Proper Shipping Name	n-Amyl methyl ketone
Hazard Class	3

Packing Group	III

Packaging-dependent regulation: Non-bulk packaging (≤ 119 gal, e.g. drums, pails, cans) ships as NON-REGULATED under the combustible-liquid reclassification (49 CFR 173.150(f)). Bulk packaging (totes/IBC > 119 gal) ships fully regulated under the DOT profile shown above. The combustible-liquid reclassification does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable (49 CFR 173.120(b)(2)).

Additional US DOT Requirements	Inner packagings of 5 L or less may ship as Limited Quantity (49 CFR 173.150(c)). Not a marine pollutant.

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)	Not a CERCLA hazardous substance (no RQ); not an EPCRA Section 313 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	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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