

Material Safety Data Sheet (MSDS)

3-Pentanone

Revision Date: 23-September-2025

Version: 1.0

Section 1: Product Identification

- **Product Name:** 3-Pentanone
- **Chemical Formula:** C₅H₁₀O
- **CAS No:** 96-22-0
- **Synonyms:** Diethyl ketone; Ethyl propyl ketone
- **Recommended Use:** Laboratory chemical; solvent; intermediate in organic synthesis.

Section 2: Hazards Identification

- **Classification (GHS):** Flammable liquids (Category 2); Eye irritation (Category 2A); Specific target organ toxicity - single exposure (Category 3, narcotic effects).
- **Signal Word:** Danger
- **Hazard Statements:**

- Highly flammable liquid and vapor
- Causes serious eye irritation
- May cause drowsiness or dizziness
- Keep away from heat/sparks/open flames. No smoking
- Use explosion-proof equipment and proper ventilation
- Wear protective gloves/eye protection
- **IF INHALED:** Remove person to fresh air and keep at rest in a comfortable position for breathing

Section 3: Composition / Information on Ingredients

- **Concentration:** 100%

Section 4: First Aid Measures

- **Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen. Seek medical attention.
- **Skin Contact:** Wash with plenty of soap and water. Remove contaminated clothing. Seek medical advice if irritation persists.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation persists.
- **Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek immediate medical advice.

Section 5: Fire-Fighting Measures

- **Suitable Extinguishing Media:** Dry chemical, foam, carbon dioxide (CO₂); water spray.
- **Specific Hazards:** Highly flammable liquid; vapors may form explosive mixtures with air; emits toxic fumes of carbon oxides under fire conditions.
- **Protective Equipment:** Firefighters should wear self-contained breathing apparatus and protective clothing.

Section 6: Accidental Release Measures

- **Personal Precautions:** Use personal protective equipment. Eliminate ignition sources. Avoid breathing vapors. Ensure adequate ventilation.
- **Environmental Precautions:** Prevent entry into drains and waterways.
- **Cleanup Methods:** Absorb with inert material (sand, earth). Collect in suitable container for disposal. Use non-sparking tools.

Section 7: Handling and Storage

- **Handling:** Avoid inhalation of vapors and contact with skin/eyes. Use only in well-ventilated areas. Keep away from ignition sources.
- **Storage:** Keep container tightly closed. Store in a cool, dry, well-ventilated place away from heat, sparks, and open flame.

Section 8: Exposure Controls / Personal Protection

- **Exposure Limits:** OSHA PEL: 200 ppm (TWA); ACGIH TLV: 200 ppm (TWA).
- **Engineering Controls:** Provide adequate ventilation, explosion-proof equipment, and local exhaust if needed.
- **Personal Protective Equipment:** Chemical-resistant gloves, safety goggles, protective clothing. Respiratory protection if ventilation is inadequate.

Section 9: Physical and Chemical Properties

- **Appearance:** Colorless liquid
- **Odor:** Sweet, acetone-like odor
- **Boiling Point:** 102 °C
- **Flash Point:** 7 °C (closed cup)
- **Solubility:** Slightly soluble in water; miscible with most organic solvents
- **Molecular Weight:** 86.13 g/mol

Section 10: Stability and Reactivity

- **Stability:** Stable under recommended storage conditions.
- **Incompatible Materials:** Strong oxidizing agents, acids.

- **Hazardous Decomposition Products:** Carbon oxides under fire conditions.

Section 11: Toxicological Information

- **Routes of Exposure:** Inhalation, ingestion, skin and eye contact.
- **Acute Effects:** Causes eye irritation; may cause drowsiness, dizziness, and respiratory irritation.
- **Chronic Effects:** Prolonged exposure may affect the liver, kidneys, and central nervous system.

Section 12: Ecological Information

- **Ecotoxicity:** Toxic to aquatic organisms in high concentrations.
- **Persistence and Degradability:** Expected to be biodegradable.
- **Bioaccumulative Potential:** Low to moderate potential.

Section 13: Disposal Considerations

- Dispose of contents/container in accordance with local/regional/national regulations. Do not release into the environment.

Section 14: Transport Information

- **UN Number:** UN1156
- **Proper Shipping Name:** Acetone oils (3-Pentanone)
- **Hazard Class:** 3 (Flammable liquid)
- **Packing Group:** II

Section 15: Regulatory Information

- Complies with Indian chemical safety regulations and listed under international chemical inventories (TSCA, EINECS, etc.).
- Classified as hazardous substance as per GHS.

Section 16: Other Information

- **Disclaimer:** The above information is believed to be correct but does not claim to be exhaustive. Users are responsible for verifying suitability under actual conditions of use. **Triveni chemicals** disclaims any liability for damage resulting from handling or contact.