# SAFETY DATA SHEET

**Revision Date** 22-Dec-2025 **Revision Number** 4

**This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)**

## 1. Identification

**Product Name** **3-Octanone**

**Cat No. :** **A12113**

**CAS No** 106-68-3
**Synonyms** n-Amyl ethyl ketone; EAK

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757

**Emergency Telephone Number**
For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

**Classification**
This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

| | |
|---|---|
| Flammable liquids | Category 3 |
| Serious Eye Damage/Eye Irritation | Category 2 |

**Label Elements**

**Signal Word**
Warning

**Hazard Statements**
Flammable liquid and vapor
Causes serious eye irritation

**Precautionary Statements**
**Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground and bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Wear protective gloves/protective clothing/eye protection/face protection
Take action to prevent static discharges
Use non-sparking tools
**Skin**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
**Eyes**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
**Fire**
In case of fire: Use CO2, dry chemical, or foam to extinguish
**Storage**
Store in a well-ventilated place. Keep cool
**Disposal**
Dispose of contents/container to an approved waste disposal plant
**Hazards not otherwise classified (HNOC)**
None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**
No information available

## 3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|---|---|---|
| Ethyl amyl ketone | 106-68-3 | 99 |

## 4. First-aid measures

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.

**Inhalation** Remove from exposure, lie down. Remove to fresh air.

**Ingestion** Clean mouth with water. Get medical attention.

**Most important symptoms and effects** Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray. Carbon dioxide ($CO_2$). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.

**Unsuitable Extinguishing Media** No information available

**Flash Point** 46 °C / 114.8 °F

**Method -** No information available

**Autoignition Temperature** 330 °C / 626 °F

**Explosion Limits**

| | |
|---|---|
| **Upper** | No data available |
| **Lower** | No data available |
| **Sensitivity to Mechanical Impact** | No information available |
| **Sensitivity to Static Discharge** | No information available |

**Specific Hazards Arising from the Chemical**
Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

**Hazardous Combustion Products**
Carbon monoxide (CO). Carbon dioxide ($CO_2$).
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 2 | 2 | 0 | N/A |

## 6. Accidental release measures

**Personal Precautions** Remove all sources of ignition. Take precautionary measures against static discharges.
**Environmental Precautions** See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## 7. Handling and Storage

**Handling** Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.

**Storage.** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Flammables area. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Strong bases. Strong reducing agents.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH | Mexico OEL (TWA) |
|---|---|---|---|---|
| Ethyl amyl ketone | | (Vacated) TWA: 25 ppm<br>(Vacated) TWA: 130 mg/m³ | | |

*Legend*

*OSHA - Occupational Safety and Health Administration*

**Engineering Measures** Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

**Appearance**

| | | |
|---|---|---|
| **Physical State** | Liquid | |
| **Color** | Light yellow | |
| **Odor** | sweet | |
| **Odor Threshold** | No information available | |
| **Property** | **Values** | **Remarks • Method** |
| **Melting Point/Range** | -23 °C / -9.4 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 167 - 168 °C / 332.6 - 334.4 °F | @ 760 mmHg |
| **Flash Point** | 46 °C / 114.8 °F | **Method -** No information available |
| **Flammability (liquid)** | Flammable | On basis of test data |
| **Flammability (solid,gas)** | Not applicable | Liquid |
| **Explosion Limits** | No data available | |
| **Autoignition Temperature** | 330 °C / 626 °F | |
| **Decomposition Temperature** | No data available | |
| **pH** | No information available | |
| **Viscosity** | 0.9 mPa s at 20 °C | |
| **Water Solubility** | 0.7 g/l water | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Component** | **log Pow** | |
| Ethyl amyl ketone | 2.9 | |
| **Vapor Pressure** | 0.1 kPa @ 20 °C | |
| **Density / Specific Gravity** | 0.822 | |
| **Bulk Density** | Not applicable | Liquid |
| **Vapor Density** | 4.4 | (Air = 1.0) |
| **Particle characteristics** | Not applicable (liquid) | |

**Other Information**

| | |
|---|---|
| **Molecular Formula** | C8 H16 O |
| **Molecular Weight** | 128.21 |
| **Explosive Properties** | explosive air/vapour mixtures possible |

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

**Incompatible Materials** Strong oxidizing agents, Strong bases, Strong reducing agents

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide ($CO_2$)

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Information on expected route of exposure**

**Inhalation** Avoid breathing vapors or mists.
**Ingestion** May be harmful if swallowed.
**Eyes** Avoid contact with eyes. Irritating to eyes. Vapor may cause irritation.
**Skin** Avoid contact with skin. May cause irritation. Prolonged skin contact may defat the skin and produce dermatitis.

**Toxicology data for the components**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Ethyl amyl ketone | LD50 > 5 g/kg ( Rat ) | LD50 > 5 g/kg ( Rabbit ) | - |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**
**Respiratory** No data available
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| Ethyl amyl ketone | 106-68-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects,both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

**Ecotoxicity**

.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|---|---|
| Ethyl amyl ketone | 2.9 |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

**UN-No** UN2271
**Hazard Class** 3
**Packing Group** III

**TDG**

**UN-No** UN2271
**Hazard Class** 3
**Packing Group** III

**IATA**

**UN-No** UN2271
**Proper Shipping Name** ETHYL AMYL KETONE
**Hazard Class** 3
**Packing Group** III

**IMDG/IMO**

**UN-No** UN2271
**Proper Shipping Name** ETHYL AMYL KETONES
**Hazard Class** 3
**Packing Group** III

## 15. Regulatory Information

**United States of America Inventory**

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|---|---|---|---|---|
| Ethyl amyl ketone | 106-68-3 | X | ACTIVE | - |

**Legend:**
**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b)** - Notices of Export Not applicable

**International Inventories**
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|
| Ethyl amyl ketone | 106-68-3 | X | - | 203-423-0 | X | X | X | X | X | KE-26666 |

**KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

**U.S. Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA** - Occupational Safety and Health Administration Not applicable

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---|---|---|---|---|---|
| Ethyl amyl ketone | - | - | X | - | - |

**U.S. Department of Transportation**
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Authorisation/Restrictions according to EU REACH** Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|---|---|---|---|---|
| Ethyl amyl ketone | 106-68-3 | - | - | - |

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---|---|---|---|---|---|
| Ethyl amyl ketone | 106-68-3 | Not applicable | Not applicable | Not applicable | Not applicable |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**
Not applicable

**Other International Regulations**

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|---|---|---|---|---|
| Ethyl amyl ketone | 106-68-3 | Not applicable | Not applicable | Not applicable | Not applicable |

## 16. Other Information

**Prepared By** Health, Safety and Environmental Department
Email: chem.techinfo@thermofisher.com
www.thermofisher.com

**Revision Date** 22-Dec-2025
**Print Date** 22-Dec-2025
**Revision Summary** Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information**

**relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

## End of SDS