

**Safety Data Sheet**  
acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/24/2025

Reviewed on 01/24/2025

## 1 Identification

- **Product identifier**
- **Trade name: 2-Heptanone Mixture natural**
- **CAS Number:**  
110-43-0
- **Other means of identification**
- **Product number:** 1660
- **EC number:**  
203-767-1
- **Index number:**  
606-024-00-3
- **Application of the substance / the mixture** Flavoring Ingredients

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

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- **Manufacturer/Supplier:**

Advanced Biotech  
10 Taft Road  
Totowa, NJ 07512 USA

- **Information department:**

Product Safety Department  
productsafety@adv-bio.com

- **Emergency telephone number:**

Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International)  
Email: responders@infotrac.net & During normal business hours: 1-973-339-6242

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable liquids 3

H226 Flammable liquid and vapor.



GHS07

Acute toxicity - oral 4

H302 Harmful if swallowed.

Acute toxicity - inhalation 4

H332 Harmful if inhaled.

Specific target organ toxicity (single exposure) 3

H336 May cause drowsiness or dizziness.

- **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

The substance is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

Heptan-2-one

· **Hazard statements**

H226 Flammable liquid and vapor.

H302+H332 Harmful if swallowed or 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.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Information pertaining to particular dangers for man and environment:**

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

· **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

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### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
 CAS: 110-43-0 Heptan-2-one
- **Identification number(s)**
- **EC number:** 203-767-1
- **Index number:** 606-024-00-3

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
 Immediately remove any clothing soiled by the product.  
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
 Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
 In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.
- **Most important symptoms and effects, both acute and delayed**  
 No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information**  
 Cool endangered receptacles with water spray.  
 Collect contaminated fire fighting water separately. It must not enter the sewage system.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
 Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Dispose contaminated material as waste according to section 13.  
 Ensure adequate ventilation.

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· **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>	150 ppm
· <b>PAC-2:</b>	670 ppm
· <b>PAC-3:</b>	4000* ppm

· **Reference to other sections**

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

**7 Handling and storage**

· **Precautions for safe handling**

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

· **Information about protection against explosions and fires:**

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

- Please refer to the product specification and/or Certificate of Analysis for product storage requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

<b>CAS: 110-43-0 Heptan-2-one</b>	
PEL	Long-term value: 465 mg/m <sup>3</sup> , 100 ppm
REL	Long-term value: 465 mg/m <sup>3</sup> , 100 ppm
TLV	Long-term value: 50 ppm

· **Additional information:** The lists that were valid during the creation were used as a basis.

· **Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.

· **Breathing equipment:**

- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· <b>General Information</b>	Molecular Weight: 114.19 g/mol
· <b>Physical state</b>	Liquid
· <b>Color:</b>	According to product specification
· <b>Odor:</b>	According to product specification
· <b>Odor threshold:</b>	Not determined.
· <b>Melting point/Melting range:</b>	-35 °C (-31 °F)
· <b>Boiling point/Boiling range:</b>	151 °C (303.8 °F)
· <b>Flammability:</b>	Flammable.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	1 Vol %
· <b>Upper:</b>	5.5 Vol %
· <b>Flash point:</b>	41 °C (105.8 °F)
· <b>Auto igniting:</b>	533 °C (991.4 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic:</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water at 20 °C (68 °F):</b>	4.3 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	3.466 hPa (2.6 mm Hg)
· <b>Vapor pressure at 50 °C (122 °F):</b>	22 hPa (16.5 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	0.817 g/cm <sup>3</sup> (6.81787 lbs/gal)

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· <b>Relative density</b>	Not determined.
· <b>Refractive Index</b>	
· <b>Vapor density</b>	Not determined.
· <b>Particle characteristics</b>	Not applicable.
· <b>Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Liquid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Not determined.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Organic solvents:</b>	100.0 %
· <b>VOC content:</b>	100.00 %
	817.0 g/l / 6.82 lb/gal
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**ATE (Acute Toxicity Estimate)**

Oral	LD50	1,600 mg/kg (ATE)
Inhalative	LC50/4 h	11 mg/l (ATE)

**CAS: 110-43-0 Heptan-2-one**

Oral	LD50	1,600 mg/kg (ATE)
		1,670 mg/kg (rat)
Dermal	LD50	12,600 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

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- **Additional toxicological information:**
- **Interactive effects** No interactive effects between components are known.
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (Assessment by list): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- |                                  |                      |
|----------------------------------|----------------------|
| · <b>UN-Number</b>               |                      |
| · <b>DOT, IMDG, IATA</b>         | UN1110               |
| · <b>UN proper shipping name</b> |                      |
| · <b>DOT</b>                     | n-Amyl methyl ketone |
| · <b>IMDG, IATA</b>              | n-AMYL METHYL KETONE |

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· Transport hazard class(es)

· DOT



· Class 3 Flammable liquids  
 · Label 3

· IMDG, IATA



· Class 3 Flammable liquids  
 · Label 3

· Packing group III  
 · DOT, IMDG, IATA

· Environmental hazards:  
 · Marine pollutant: No

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· DOT  
 · Quantity limitations On passenger aircraft/rail: 60 L  
 On cargo aircraft only: 220 L

· IMDG

· Limited quantities (LQ) 5L  
 · Excepted quantities (EQ) Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

· Special precautions for user Warning: Flammable liquids  
 · Hazard identification number (Kemler code): 30  
 · EMS Number: F-E,S-D  
 · Stowage Category A

· UN "Model Regulation": UN 1110 N-AMYL METHYL KETONE, 3, III

**15 Regulatory information**

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

· Section 355 (extremely hazardous substances):

Substance is not listed.

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· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

ACTIVE

· **Hazardous Air Pollutants**

Substance is not listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.  
 The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

Heptan-2-one

· **Hazard statements**

- H226 Flammable liquid and vapor.
- H302+H332 Harmful if swallowed or 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.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray

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P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product Safety Department

· **Contact:**

Product Safety Department  
productsafety@adv-bio.com

· **Date of previous version** 01/16/2024

· **Date of preparation** 01/24/2025

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable liquids 3: Flammable liquids – Category 3

Acute toxicity - oral 4: Acute toxicity – Category 4

Specific target organ toxicity (single exposure) 3: Specific target organ toxicity (single exposure) – Category 3