

**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**1 Identification**

- **Product identifier**
- **Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**
- **Product number:** 1087
- **Application of the substance / the mixture** Food flavorings

- **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:**

1(800)535-5053 (Info Trac)  
 1(352)323-3500 (International)  
 During normal business hours: 1(973)339-6242

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements** Harmful in contact with skin or if inhaled.

- **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 product is classified and labeled according to the Globally Harmonized System (GHS).

(Continued on page 2)

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 1)

· **Hazard pictograms**



GHS05

· **Signal word** Danger

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

Lauric acid  
 caprylic acid

· **Hazard statements**

H315 Causes skin irritation.  
 H318 Causes serious eye damage.

· **Precautionary statements**

P280 Wear protective gloves / eye protection / face protection.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a poison center/doctor.  
 P321 Specific treatment (see on this label).  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P332+P313 If skin irritation occurs: Get medical advice/attention.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3  
 Fire = 1  
 Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*3  
 Fire = 1  
 Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**



- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

Lauric acid	 Eye Dam. 1, H318
Oleic Acid	 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335

(Continued on page 3)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 2)

Capric acid	⚠ Skin Irrit. 2, H315
caprylic acid	⚠ Skin Corr. 1A, H314
2-Heptanone	🔥 Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332
2-Nonanone	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Flam. Liq. 4, H227

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for 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. Use fire fighting measures that suit the environment.  
CO<sub>2</sub>, powder or alcoholresistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.
- **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).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

(Continued on page 4)

**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 3)

See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

	Myristic acid	0.14 mg/m <sup>3</sup>
	Palmitic acid	0.19 mg/m <sup>3</sup>
	Oleic Acid	220 mg/m <sup>3</sup>
CAS: 57-11-4	Stearic Acid	14 mg/m <sup>3</sup>
	caprylic acid	30 mg/m <sup>3</sup>
	2-Heptanone	150 ppm
	2-Nonanone	0.51 ppm
	2-Undecanone	0.91 ppm
	Caproic acid	2.2 mg/m <sup>3</sup>
	2-Pentanone	150 ppm

· **PAC-2:**

	Myristic acid	1.6 mg/m <sup>3</sup>
	Palmitic acid	2.1 mg/m <sup>3</sup>
	Oleic Acid	2,400 mg/m <sup>3</sup>
CAS: 57-11-4	Stearic Acid	150 mg/m <sup>3</sup>
	caprylic acid	330 mg/m <sup>3</sup>
	2-Heptanone	670 ppm
	2-Nonanone	5.6 ppm
	2-Undecanone	10 ppm
	Caproic acid	24 mg/m <sup>3</sup>
	2-Pentanone	830 ppm

· **PAC-3:**

	Myristic acid	9.3 mg/m <sup>3</sup>
	Palmitic acid	12 mg/m <sup>3</sup>
	Oleic Acid	15,000 mg/m <sup>3</sup>
CAS: 57-11-4	Stearic Acid	910 mg/m <sup>3</sup>
	caprylic acid	2,000 mg/m <sup>3</sup>
	2-Heptanone	4000* ppm
	2-Nonanone	34 ppm
	2-Undecanone	60 ppm
	Caproic acid	140 mg/m <sup>3</sup>
	2-Pentanone	5000* ppm

US

(Continued on page 5)

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 4)

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
 No special requirements.  
 Please refer to product specification 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

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
 The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
 At this time, the other constituents have no known exposure limits.

#### 2-Heptanone

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: 233 mg/m <sup>3</sup> , 50 ppm

- **Additional information:** The lists that were valid during the creation were used as a basis.
- **Exposure controls**
- **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.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Continued on page 6)

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 5)

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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**

· **General Information**

· **Appearance:**

**Form:** Slurry, solid (may solidify at low temperatures, can be reconstituted by melting for several hours at <60°C)

**Color:** According to product specification

· **Odor:** According to product specification

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

· **Flash point:** >110 °C (>230 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 360 °C (680 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

(Continued on page 7)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 6)

· <b>Vapor pressure at 121 °C (249.8 °F):</b>	1.3 hPa (1 mm Hg)
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	1.8 %
<b>VOC content:</b>	1.81 %
	18.1 g/l / 0.15 lb/gal
· <b>Solids content:</b>	78.8 %
· <b>Other information</b>	No further relevant information available.

### 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	57,405 mg/kg (rat)
Dermal	LD50	225,000 mg/kg (rabbit)
Inhalative	LC50/4 h	625 mg/l

**caprylic acid**

Oral	LD50	10,080 mg/kg (rat)
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(Continued on page 8)

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 7)

Dermal	LD50	>5,000 mg/kg (rabbit)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
 The product shows the following dangers according to internally approved calculation methods for preparations:  
 Irritant

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

### 12 Ecological information

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

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Continued on page 9)



## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 8)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |  |
|--|--|
| · <b>UN-Number</b>   |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Not Regulated  |
| · <b>UN proper shipping name</b>   |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Not Regulated  |
| · <b>Transport hazard class(es)</b>  |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |  |
| · <b>Class</b>   | Not Regulated  |
| · <b>Packing group</b>   |  |
| · <b>DOT, ADR, IMDG, IATA</b>  | Not Regulated  |
| · <b>Environmental hazards:</b>  | Not applicable.                                      |
| · <b>Special precautions for user</b>  | Not applicable.                                      |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | Not Regulated  |

### 15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All ingredients are listed.

· **TSCA new (21st Century Act) (Substances not listed)**

2-Nonanone

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

(Continued on page 10)

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 9)

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is 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 product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

· **Signal word** Danger

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

Lauric acid  
 caprylic acid

· **Hazard statements**

H315 Causes skin irritation.  
 H318 Causes serious eye damage.

· **Precautionary statements**

P280 Wear protective gloves / eye protection / face protection.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a poison center/doctor.  
 P321 Specific treatment (see on this label).  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P332+P313 If skin irritation occurs: Get medical advice/attention.

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

US

(Continued on page 11)

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

**Trade name: Methyl Ketones Mix (Blue Cheese Type) Natural**

(Continuation of page 10)

### 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.

· **Relevant phrases**

- H226 Flammable liquid and vapor.
- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.

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

· **Contact:**

Product Safety Department  
 productsafety@adv-bio.com

· **Date of preparation / last revision** 01/08/2019 / -

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport 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
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified 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
- Flam. Liq. 3: Flammable liquids – Category 3
- Flam. Liq. 4: Flammable liquids – Category 4
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1A: Skin corrosion/irritation – Category 1A
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3