

Date of issue: 04/17/2025 Reviewed on 04/17/2025

1 Identification

· Product identifier

· Trade name: Butter Enhancer Synthetic

· Other means of identification

· Product number: 2270

· Application of the substance / the mixture Flavoring Ingredients

· Details of the supplier of the safety data sheet

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Advanced Biotech makes NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the Advanced Biotech product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of an Advanced Biotech product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Advanced Biotech product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Specific target organ toxicity (repeated exposure) 2 H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.



Eye damage 1 H318 Causes serious eye damage.



Sensitization - skin 1

H317 May cause an allergic skin reaction.

(Continued on page 2)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 1)

· 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









GHS02 GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

2,3-Pentanedione

Acetoin (Liquid)

· Hazard statements

H225 Highly flammable liquid and vapor.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P260 Do not breathe 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].

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.

P403+P235 Store in a well-ventilated place. Keep cool.

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

regulations.

· Additional information:

Exposure may cause a serious lung disease (called bronchiolitis obliterans). The damage to the lungs can be permanent, severe and can lead to death. Individuals exposed to Acetyl Propionyl who have persistent cough and/or shortness of breath should see a physician immediately and evaluated for lung disease. Employers should provide exposed employees with lung function tests and respiratory health questionnaires before beginning to work with Acetyl Propionyl and at least every six months thereafter. A licensed physician should review the tests to look for decreases in lung function over time.

- · Information pertaining to particular dangers for man and environment:
- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 3 Fire = 3 Reactivity = 0

(Continued on page 3)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

· HMIS-ratings (scale 0 - 4)

(Continuation of page 2)



Health = *3 Fire = 3

- 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.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flammable liquids 2, H225	50-100%
CAS: 57-55-6 EINECS: 200-338-0	Propylene glycol	10-25%
CAS: 600-14-6 EINECS: 209-984-8	2,3-Pentanedione ♠ Flammable liquids 2, H225; ♦ Specific target organ toxicity (repeated exposure) 2, H373; ♦ Eye damage 1, H318; ♦ Skin irritation 2, H315; Sensitization - skin 1, H317	10-25%
CAS: 513-86-0 EINECS: 208-174-1	Acetoin (Liquid) ♦ Flammable liquids 3, H226; ♦ Eye damage 1, H318	≥1-≤2.5%

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 and be sure to call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed

No further relevant information available.

(Continued on page 4)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 3)

· Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents:

CO2, 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

During heating or in case of fire poisonous gases are produced.

- · 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

Mount respiratory protective device.

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 section 13.

Ensure adequate ventilation.

· Protective Action Criteria for Chemicals

PAC-1:			
CAS: 64-17-5	Ethanol	1,800 ppm	
CAS: 57-55-6	Propylene glycol	30 mg/m³	
CAS: 142-62-1	Caproic Acid (Hexanoic Acid)	2.2 mg/m ³	
· PAC-2:			
CAS: 64-17-5	Ethanol	3300* ppm	
	Propylene glycol	1,300 mg/m ³	
CAS: 142-62-1	Caproic Acid (Hexanoic Acid)	24 mg/m³	
· PAC-3:			
CAS: 64-17-5	Ethanol	15000* ppm	
CAS: 57-55-6	Propylene glycol	7,900 mg/m³	
CAS: 142-62-1	Caproic Acid (Hexanoic Acid)	140 mg/m³	

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.



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 4)

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.

Keep respiratory protective device available.

- Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· 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:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

CAS:	CAS: 64-17-5 Ethanol	
PEL	Long-term value: 1900 mg/m³, 1000 ppm	
REL	Long-term value: 1900 mg/m³, 1000 ppm	
TLV	Short-term value: 1880 mg/m³, 1000 ppm A3	
CAS:	CAS: 57-55-6 Propylene glycol	
WEEL Long-term value: 10 mg/m³		

- · 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.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· 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.

(Continued on page 6)

(Continuation of page 5)



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

Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

· 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. 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

· Physical state Liquid

Color: According to product specificationOdor: According to product specification

Odor threshold:
 Melting point/Melting range:
 Boiling point/Boiling range:
 Flammability:
 Not determined.
 Undetermined.
 Highly flammable.

Explosion limits:

Lower: 2.6 Vol %
 Upper: 15 Vol %
 Flash point: 17 °C (62.6 °F)
 Auto igniting: 371 °C (699.8 °F)
 Decomposition temperature: Not determined

Decomposition temperature:

PH-value:

Not determined.

Not determined.

Viscosity:

Kinematic: Not determined.Dynamic: Not determined.

· Solubility in / Miscibility with

· Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water):
 Vapor pressure at 20 °C (68 °F):
 Not determined.
 59 hPa (44.3 mm Hg)

(Continued on page 7)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 6)

· Vapor pressure at 50 °C (122 °F): 280 hPa (210 mm Hg)

Density at 20 °C (68 °F): 0.86-0.89 g/cm³ (7.1767-7.42705 lbs/gal)

Relative density Not determined.

· Refractive Index

Vapor densityParticle characteristicsNot determined.Not applicable.

Other information

· Appearance:

· Form: Liquid

· Important information on protection of health

and environment, and on safety.

· **Ignition temperature:** Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of

explosive air/vapor mixtures are possible.

· Solvent content:

· Organic solvents: 87.1 % · VOC content: 68.74 %

591.2-611.8 g/l / 4.93-5.11 lb/gal

· Solids content: 0.0 %

· Change in condition

· Evaporation rate 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:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: Strong irritant with the danger of severe eye injury.
- · Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

İrritant

Interactive effects No interactive effects between components are known.

(Continued on page 8)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 7)

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

CAS: 64-17-5 Ethanol

1

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is 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 (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.

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

- · UN-Number
- · DOT, IMDG, IATA UN1197
- · UN proper shipping name
- DOT, IATA Extracts, liquid
- · IMDG EXTRACTS, LIQUID

(Continued on page 9)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 8)

· Transport hazard class(es)

· DOT



· Class 3 Flammable liquids

· Label 3

· IMDG, IATA



· Class 3 Flammable liquids

· Label 3

· Packing group

· DOT, IMDG, IATA Ш

· Environmental hazards: Not applicable.

· 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: 5 L

On cargo aircraft only: 60 L

· IMDG

· Limited quantities (LQ) 5L

Excepted quantities (EQ) Code: E2

> Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· Special precautions for user Warning: Flammable liquids

· Hazard identification number (Kemler code): 33

· EMS Number: F-E,S-D

Stowage Category

· UN "Model Regulation": UN 1197 EXTRACTS, LIQUID, 3, II

15 Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

(Continued on page 10)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 9)

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· 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:

CAS: 64-17-5 Ethanol

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

CAS: 64-17-5 Ethanol

А3

· 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









GHS02 GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

2,3-Pentanedione

Acetoin (Liquid)

· Hazard statements

H225 Highly flammable liquid and vapor.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

· Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

(Continued on page 11)



Date of issue: 04/17/2025 Reviewed on 04/17/2025

Trade name: Butter Enhancer Synthetic

(Continuation of page 10)

P260 Do not breathe 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].

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.

P403+P235 Store in a well-ventilated place. Keep cool.

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.

Relevant phrases

H225 Highly flammable liquid and vapor.

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Product Safety Department

· Contact:

Product Safety Department productsafety@adv-bio.com

- Date of previous version 01/24/2025
- · Date of preparation 04/17/2025
- · 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

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)

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 2: Flammable liquids - Category 2

Flammable liquids 3: Flammable liquids - Category 3

Skin irritation 2: Skin corrosion/irritation – Category 2

Eye damage 1: Serious eye damage/eye irritation - Category 1

Sensitization - skin 1: Skin sensitisation - Category 1

Specific target organ toxicity (repeated exposure) 2: Specific target organ toxicity (repeated exposure) - Category 2