

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

Date of issue: 04/14/2026

Reviewed on 04/14/2026

1 Identification

· **Product identifier**

- Trade name: 2-Acetyl Thiazole 5% ETOH Nat
- Other means of identification

· **Product number:** 1998

- **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) Contract 72941
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.



GHS07

Eye irritation 2A H319 Causes serious eye irritation.

· **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 GHS07

· **Signal word** Danger

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Hazard statements

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.

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.
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.
P403+P235 Store in a well-ventilated place. Keep cool.
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 = 2
Fire = 3
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 2
Fire = 3
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.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

CAS: 24295-03-2 1-(Thiazol-2-yl)ethan-1-one

Identification number(s)

EC number: 246-134-5

Chemical characterization: Mixtures

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

Dangerous components:

CAS: 64-17-5	Ethanol	50-100%
EINECS: 200-578-6	⚠ Flammable liquids 2, H225; ⚠ Eye irritation 2A, H319	

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CAS: 24295-03-2	1-(Thiazol-2-yl)ethan-1-one	2.5-10%
EINECS: 246-134-5	Flammable liquids 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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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:**
 CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant 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:**
 Dilute with plenty of water.
 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
CAS: 64-17-5	Ethanol	1800? ppm
· PAC-2:		
CAS: 64-17-5	Ethanol	3300?* ppm
· PAC-3:		
CAS: 64-17-5	Ethanol	15000* ppm

- **Reference to other sections**
 See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

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7 Handling and storage

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **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.
 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 constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 At this time, the remaining constituent has no known exposure limits.

CAS: 64-17-5 Ethanol

PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1880 mg/m ³ , 1000 ppm
A3	

- **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.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required
- **Protection of hands:**



Protective gloves

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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	Molecular Weight: 127.17 g/mol
· Physical state	Liquid
· Color:	According to product specification
· Odor:	According to product specification
· Odor threshold:	Not determined
· Melting point/Melting range:	Undetermined
· Boiling point/Boiling range:	Undetermined
· Flammability:	Highly flammable.
· Explosion limits:	
· Lower:	Not determined
· Upper:	Not determined
· Flash point:	10.2 °C (50.4 °F)
· Decomposition temperature:	Not determined
· pH-value:	Not determined
· Viscosity:	
· Kinematic:	Not determined
· Dynamic:	Not determined
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined
· Vapor pressure:	Not determined
· Vapor pressure:	
· Density at 20 °C (68 °F):	1.228 g/cm ³ (10.24766 lbs/gal)
· Relative density	Not determined
· Specific Gravity	0.810-0.840 @ 20 °C (33.5-33.5 @ 68 °F)
· Refractive Index	1.360-1.380 @ 20 °C (34.4-34.5 @ 68 °F)
· Vapor density	Not determined

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· Particle characteristics	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:	95.0 %
· VOC content:	95.00 % 1,166.6 g/l / 9.74 lb/gal
· 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:**

· LD/LC50 values that are relevant for classification:		
CAS: 64-17-5 Ethanol		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Interactive effects** No interactive effects between components are known.

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
CAS: 64-17-5	Ethanol	1

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· **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.

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.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, IMDG, IATA**

UN1170

· **UN proper shipping name**

· **DOT**

· **IMDG**

· **IATA**

Ethanol solutions

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

ETHANOL SOLUTION

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<ul style="list-style-type: none"> · Transport hazard class(es) 	
<ul style="list-style-type: none"> · DOT 	
	
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids 3
<hr/> <ul style="list-style-type: none"> · IMDG, IATA 	
	
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids 3
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · DOT · Quantity limitations 	
On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L	
<hr/> <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	
1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category 	Warning: Flammable liquids 33 F-E,S-D A
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

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.

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<ul style="list-style-type: none"> · Section 313 (Specific toxic chemical listings): None of the ingredients is listed.
<ul style="list-style-type: none"> · TSCA (Toxic Substances Control Act): All components have the value ACTIVE.
<ul style="list-style-type: none"> · Hazardous Air Pollutants None of the ingredients is listed.
<ul style="list-style-type: none"> · Proposition 65
<ul style="list-style-type: none"> · Chemicals known to cause cancer: None of the ingredients is listed.
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.
<ul style="list-style-type: none"> · Chemicals known to cause developmental toxicity: CAS: 64-17-5 Ethanol
<ul style="list-style-type: none"> · Carcinogenic categories
<ul style="list-style-type: none"> · EPA (Environmental Protection Agency) None of the ingredients is listed.
<ul style="list-style-type: none"> · TLV (Threshold Limit Value) CAS: 64-17-5 Ethanol A3
<ul style="list-style-type: none"> · NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed.
<ul style="list-style-type: none"> · 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).
<ul style="list-style-type: none"> · Hazard pictograms   GHS02 GHS07
<ul style="list-style-type: none"> · Signal word Danger
<ul style="list-style-type: none"> · Hazard statements H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation.
<ul style="list-style-type: none"> · 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. 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.

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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.
H227 Combustible liquid.
H319 Causes serious eye irritation.

- **Department issuing SDS:** Product Safety Department

- **Contact:**

Product Safety Department
productsafety@adv-bio.com

- **Date of previous version** 04/10/2026

- **Date of preparation** 04/14/2026

- **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)
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 2: Flammable liquids – Category 2
Flammable liquids 4: Flammable liquids – Category 4
Eye irritation 2A: Serious eye damage/eye irritation – Category 2A