

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

## 1 Identification

- **Product identifier**
- **Trade name:** 2,5-Dimethyl Pyrazine Synthetic
- **CAS Number:**  
123-32-0
- **Other means of identification**
- **Product number:** 4008
- **EC number:**  
204-618-3
- **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**



GHS07

Acute toxicity - oral 4 H302 Harmful if swallowed.

Flammable liquids 4 H227 Combustible liquid.

- **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**



GHS07

- **Signal word** Warning

(Continued on page 2)

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Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 1)

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

2,5-Dimethylpyrazine

· **Hazard statements**

H227 Combustible liquid.

H302 Harmful if swallowed.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves / eye protection / face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P403 Store in a well-ventilated place.

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.

## 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

CAS: 123-32-0 2,5-Dimethylpyrazine

· **Identification number(s)**

· **EC number:** 204-618-3

US

(Continued on page 3)

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 2)

## 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
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; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **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.
- **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** Not required.
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

Substance is not listed.

· **PAC-2:**

Substance is not listed.

· **PAC-3:**

Substance is not listed.

· **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.

US

(Continued on page 4)

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 3)

## 7 Handling and storage

- **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:**  
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:** None.
- **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:** Not required.
- **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.  
Wash hands before breaks and at the end of work.
- **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.  
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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

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

- |                              |                                    |
|------------------------------|------------------------------------|
| · <b>General Information</b> | Molecular Weight: 108.14 g/mol     |
| · <b>Physical state</b>      | Liquid                             |
| · <b>Color:</b>              | According to product specification |

(Continued on page 5)

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 4)

· Odor:	According to product specification
· Odor threshold:	Not determined.
· Melting point/Melting range:	15 °C (59 °F)
· Boiling point/Boiling range:	155 °C (311 °F)
· Flammability:	Not applicable.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	62.3 °C (144.1 °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):	0.985-0.995 g/cm <sup>3</sup> (8.21983-8.30328 lbs/gal)
· Relative density	Not determined.
· Specific Gravity	0.985 - 0.995 @ 20 °C (33.8 - 33.8 @ 68 °F)
· Refractive Index	
· Vapor density	Not determined.
· Particle characteristics	Not applicable.
· Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· VOC content:	0.00 % 0.0 g/l / 0.00 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.

(Continued on page 6)

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 5)

· **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	1,020 mg/kg (ATE)
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**CAS: 123-32-0 2,5-Dimethylpyrazine**

Oral	LD50	1,020 mg/kg (ATE)
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		1,020 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **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.
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· **NTP (National Toxicology Program)**

Substance is not listed.
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· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.
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· **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.

— US —

(Continued on page 7)

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 6)

## 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

- |  |  |
|--|--|
| · <b>UN-Number</b>   |  |
| · <b>DOT, IMDG, IATA</b>   | Not Regulated  |
| · <b>UN proper shipping name</b>   |  |
| · <b>DOT, IMDG, IATA</b>   | Not Regulated  |
| · <b>Transport hazard class(es)</b>  |  |
| · <b>DOT, ADN, IMDG, IATA</b>  |  |
| · <b>Class</b>   | Not Regulated  |
| · <b>Packing group</b>   |  |
| · <b>DOT, IMDG, IATA</b>   | Not Regulated  |
| · <b>Environmental hazards:</b>  |  |
| · <b>Marine pollutant:</b>   | No   |
| · <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>Special precautions for user</b>  | Not applicable.                                      |
| · <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):**

Substance is not listed.

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

Substance is not listed.

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

ACTIVE

- **Hazardous Air Pollutants**

Substance is not listed.

(Continued on page 8)



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acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/25/2025

Reviewed on 01/25/2025

Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 7)

· **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**



GHS07

· **Signal word** Warning

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

2,5-Dimethylpyrazine

· **Hazard statements**

H227 Combustible liquid.

H302 Harmful if swallowed.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves / eye protection / face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P403 Store in a well-ventilated place.

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.

US

(Continued on page 9)



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Trade name: 2,5-Dimethyl Pyrazine Synthetic

(Continuation of page 8)

## 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** 01/10/2023

• **Date of preparation** 01/25/2025

• **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 4: Flammable liquids – Category 4

Acute toxicity - oral 4: Acute toxicity – Category 4

US