

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-Methoxy-3-Isobutyl Pyrazine Synthetic

· **CAS Number:**

24683-00-9

· **Other means of identification**

· **Product number:** 4015

· **EC number:**

246-402-1

· **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**

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** Not Applicable

· **Signal word** Warning

· **Hazard statements**

H227 Combustible liquid.

· **Precautionary statements**

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

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.

P403 Store in a well-ventilated place.

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

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



Health = 0
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: 24683-00-9 2-Isobutyl-3-methoxypyrazine
- Identification number(s)
- EC number: 246-402-1

4 First-aid measures

- Description of first aid measures
- 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: 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.

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- **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:** No special measures required.
- **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.

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:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.

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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:** Goggles recommended during refilling.

9 Physical and chemical properties

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

· **General Information**

· **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:**

214-215 °C (417.2-419 °F)

· **Flammability:**

Not applicable.

· **Explosion limits:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

80 °C (176 °F)

· **Decomposition temperature:**

Not determined.

· **pH-value:**

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):**

Not determined.

· **Vapor pressure:**

Not determined.

· **Vapor pressure:**

· **Density at 20 °C (68 °F):**

0.99-1.01 g/cm³ (8.26155-8.42845 lbs/gal)

· **Relative density**

Not determined.

· **Specific Gravity**

0.990-1.010 @ 20 °C (33.8-33.8 @ 68 °F)

· **Refractive Index**

· **Vapor density**

Not determined.

· **Particle characteristics**

Not applicable.

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- **Other information**
- **Appearance:**
- **Form:** Liquid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Not determined.
- **Danger of explosion:** Not determined.
- **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.
- **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: 24683-00-9 2-Isobutyl-3-methoxypyrazine | | |
| Oral | LD50 | 4,000 mg/kg (ATE) |
- **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.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **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:** Not hazardous for water.

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, ADN, IMDG, IATA	Not Regulated
· UN proper shipping name	
· DOT, ADN, IMDG, IATA	Not Regulated
· Transport hazard class(es)	
· DOT, ADN, IMDG, IATA	
· Class	Not Regulated
· Packing group	
· DOT, IMDG, IATA	Not Regulated
· Environmental hazards:	
· Marine pollutant:	No
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· Special precautions for user	Not applicable.

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· **UN "Model Regulation":** 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.

· **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**

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

· **Hazard pictograms** Not Applicable

· **Signal word** Warning

· **Hazard statements**

H227 Combustible liquid.

· **Precautionary statements**

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

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.

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- 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.

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