1 Identification

- Product identifier
  - Trade name: Pyrazine Mix VI Natural
  - Product number: 1712
  - 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

  ![GHS07]

  Skin Irrit. 2  H315  Causes skin irritation.
  Eye Irrit. 2A  H319  Causes serious eye irritation.
  STOT SE 3  H335  May cause respiratory irritation.

  Flam. Liq. 4  H227  Combustible liquid.

- 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).

- Hazard pictograms

  ![GHS07]

- Signal word
  Warning

(Continued on page 2)
Trade name: Pyrazine Mix VI Natural

Hazard-determining components of labeling:
2-Ethyl-3,5,6-Trimethyl Pyrazine

Hazard statements
H227 Combustible liquid.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves/protective clothing/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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)
Health = 2
Fire = 2
Reactivity = 0

HMIS-ratings (scale 0 - 4)
HEALTH
2
FIRE
2
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:
CAS: 17398-16-2 2-Ethyl-3,5,6-Trimethyl Pyrazine
Skin irrit. 2, H315; Eye irrit. 2A, H319; STOT SE 3, H335
65-75%

CAS: 18138-04-0 2,3-diethyl-5-methylpyrazine
Flam. Liq. 4, H227
8-12%

CAS: 18138-04-0 3,5-diethyl-2-methyl pyrazine
Flam. Liq. 4, H227
8-12%

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.

(Continued on page 3)
Trade name: Pyrazine Mix VI Natural

- **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.
- **Information for doctor**: None further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**: None 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**: None 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 item 13.
  - Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**
  - **PAC-1**: None of the ingredients is listed.
  - **PAC-2**: None of the ingredients is listed.
  - **PAC-3**: None of the ingredients is listed.
7 Handling and storage

· Handling:
  · 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.

· 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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  · 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:
  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.
  · 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
Trade name: Pyrazine Mix VI Natural

- 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:** Liquid
    - **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:** 79.2 °C (174.6 °F)
  - **Flammability (solid, gaseous):** Not applicable.
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Not determined.
  - **Explosion limits:**
    - **Lower:** Not determined.
    - **Upper:** Not determined.
  - **Vapor pressure:** Not determined.
  - **Density at 20 °C (68 °F):** 0.93-1.035 g/cm³ (7.76085-8.63707 lbs/gal)
  - **Specific Gravity**
    - 0.930-1.035 @ 20 °C (33.730.1 @ 68 °F)
  - **Relative density**
    - Not determined.
  - **Vapor density**
    - Not determined.
  - **Evaporation rate**
    - Not determined.
  - **Solubility in / Miscibility with**
    - **Water:** Fully miscible.
  - **Partition coefficient (n-octanol/water):** Not determined.
  - **Viscosity:**
    - **Dynamic:** Not determined.
    - **Kinematic:** Not determined.
Trade name: Pyrazine Mix VI Natural

- Solvent content:
  - VOC content: 0.00 %
  - 0.0 g/l / 0.00 lb/gal
- Solids content: 0.0 %
- Other information: 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:
  - 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
- 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.
**Trade name: Pyrazine Mix VI Natural**

- **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.
- **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.
- **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, ADR, IMDG, IATA UN1993
- **UN proper shipping name**
  - DOT Flammable liquids, n.o.s.
  - ADR 1993 FLAMMABLE LIQUID, N.O.S.
  - IMDG, IATA FLAMMABLE LIQUID, N.O.S.
- **Transport hazard class(es)**
  - **DOT**
    - **Class** 3 Flammable liquids
    - **Label** 3
  - **ADR**
    - **Class** 3 (F1) Flammable liquids

(Continued on page 8)
Trade name: Pyrazine Mix VI Natural

- Label: 3
- IMDG, IATA

- Class: 3 Flammable liquids
- Packing group: 3
- DOT, ADR, IMDG, IATA: III
- Environment hazards: Not applicable.
- Special precautions for user: Warning: Flammable liquids
- Hazard identification number (Kemler code): 30
- EMS Number: F-E, S-E
- Stowage Category: A
- 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: 60 L
    On cargo aircraft only: 220 L
  - ADR
  - Excepted quantities (EQ) Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml
  - IMDG
  - Limited quantities (LQ): 5L
  - Excepted quantities (EQ) Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation": UN 1993 FLAMMABLE LIQUID, N.O.S., 3, III

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):
  - CAS: 18138-04-0 2,3-diethyl-5-methylpyrazine ACTIVE
  - CAS: 18138-04-0 3,5-diethyl-2-methyl pyrazine ACTIVE

(Continued on page 9)
Trade name: Pyrazine Mix VI Natural

- Hazardous Air Pollutants
  None of the ingredients is listed.

- Proposition 65
  None of the ingredients is listed.

- 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:
  None of the ingredients is listed.

- Carcinogenic categories
  None of the ingredients is listed.

- 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
  GHS07

- Signal word
  Warning

- Hazard-determining components of labeling:
  2-Ethyl-3,5,6-Trimethyl Pyrazine

- Hazard statements
  H227 Combustible liquid.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.

- Precautionary statements
  P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  P261 Avoid breathing dust/fume/gas/mist/vapors/spray
  P280 Wear protective gloves/protective clothing/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.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Continued on page 10)
· 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
  H227 Combustible liquid.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.

· Department issuing SDS: Product Safety Department

· Date of preparation / last revision 03/03/2020 / -

· 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)
  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. 4: Flammable liquids – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3