

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

1 Identification

- **Product identifier**
- **Trade name:** Tetrazine natural
- **Product number:** 1417
- **CAS Number:** 27043-05-6
- **EINECS Number:** 248-182-2
- **Application of the substance / the mixture** Food flavorings
- **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:**
 1(800)535-5053 (Info Trac)
 1(352)323-3500 (International)
 During normal business hours: 1(973)339-6242

2 Hazard(s) identification

- **Classification of the substance or mixture**
 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** Not Applicable
- **Signal word** Warning
- **Hazard statements**
 H227 Combustible liquid.
- **Precautionary statements**
 - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - P280 Wear protective gloves / eye protection / face protection.
 - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
 - P403+P235 Store in a well-ventilated place. Keep cool.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Continued on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
 Fire = 2
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 0
 Fire = 2
 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not Applicable

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.
- **Information for 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.

US

(Continued on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 2)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.
- **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** No special precautions are necessary if used correctly.
- **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:** Wash hands before breaks and at the end of work.

(Continued on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 3)

- **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. 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:** Goggles recommended during refilling.

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:**

>60 °C (>140 °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):**

0.96 g/cm³ (8.0112 lbs/gal)

- **Relative density**

Not determined.

(Continued on page 5)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 4)

· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent content:	
· VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
· 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:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **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.

(Continued on page 6)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 5)

- **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.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **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.

14 Transport information

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

US

(Continued on page 7)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 6)

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):**

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:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **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** Not Applicable

- **Signal word** Warning

· **Hazard statements**

H227 Combustible liquid.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves / eye protection / face protection.

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

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.

US

(Continued on page 8)

Safety Data Sheet
 acc. to OSHA HCS

Printing date 02/11/2019

Reviewed on 02/08/2019

Trade name: Tetrazine natural

(Continuation of page 7)

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 preparation / last revision** 02/11/2019 / -

· **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

US