



## **Material Safety Data Sheet (2001/58/EC)**

### **1. Identification of the substance/preparation and of the company**

- Date of issue: February, 2008
- Product name: 1186 Furfural Natural
- Recommended use: Flavorings
- Manufacturer: Advanced Biotech, Paterson, NJ 07524
- Emergency telephone no.: Info Trac# 800-535-5053  
International # 352-323-3500

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### **2. Composition/information on ingredients**

- Chemical identity: 2-Furaldehyde
- Molecular formula:  $C_5H_4O_2$
- CAS No.: 98-01-1
- EC No.: 202-627-7
- EC-Index-No.: 605-010-00-4

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### **3. Hazards identification**

Harmful in contact with skin. Toxic by inhalation and if swallowed. Irritating to eyes and respiratory system. Limited evidence of a carcinogenic effect.

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### **4. First aid measures**

- After inhalation: Provide with fresh air
- After skin contact: Take off all contaminated clothing, wash with plenty of water
- After eye contact: Rinse thoroughly with plenty of water and seek medical advice
- After swallowing: Immediately drink plenty of water; Seek medical advice and show this container or label

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### **5. Fire-fighting measures**

- **Suitable extinguishing media:**  
Carbon Dioxide (CO<sub>2</sub>), foam, powder
- **Special protective equipment for fire fighting:**  
Do not stay in danger zone without self-contained breathing apparatus.
- **Other information:**  
Cool container with water spray from a safe distance. Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or groundwater. Keep away from sources of ignition.
- **Special risks:**  
Combustible. May form explosive mixtures with air at ambient temperatures. Development of hazardous combustion gases or vapors possible in the event of fire.

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### **6. Accidental release measures**

- **Person-related precautionary measures:**  
Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.



- **Environmental-protection measures:**  
Do not allow to enter sewage system.
- **Procedures for cleaning / absorption:**  
Take up with liquid-absorbent material. Forward for disposal. Clean affected area.

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## 7. Handling and storage

- **Handling:**  
Take precautionary measures against static discharges. Keep away from source of ignition. When using do not eat or drink.
- **Storage:**  
Tightly closed, in a well-ventilated place. Keep away from source of ignition - no smoking.

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## 8. Exposure controls and personal protection

- **Exposure limits**  
Avoid contact with eyes, skin, clothing, and breathing vapor.
- **Personal protective equipment:**  
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
  - Respiratory protection: Required when vapors/aerosols are generated.
  - Eye protection: Wear eye/ face protection
  - Hand protection: Wear suitable gloves
  - Industrial hygiene: Change contaminated clothing. Application of skin-protective barrier cream recommended. Wash hands after working with substance.

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## 9. Physical and chemical properties:

- Form: Liquid
- Color: Yellow to brown
- Odor: Woody
- pH value at 10 g/l H<sub>2</sub>O: No information available
- Boiling point: 162°C
- Flash point: 60°C
- Melting point: N/a
- Explosive properties: No information available
- Lower explosion limit: 2.1 Vol%
- Upper explosion limit: 19.3 Vol%
- Ignition temperature: 315°C
- Oxidizing properties: Not oxidizing; not flammable
- Vapor pressure: 1 hPa
- Density/specific gravity@20°C: 1.158-1.168
- Solubility in Water: 83 g/l soluble
- Organic solvents: Soluble

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## 10. Stability and reactivity

- Conditions to be avoided: Strong Heating
- Substances to be avoided: Strong oxidizing agents, alkali hydroxides, acids,



- Hazardous decomposition products: alkalis.  
Carbon monoxide, carbon dioxide
  - Further information: Sensitive to light; combustible;  
Unsuitable working materials: various plastics,  
rubber.
- Explosible with air in a vaporous/gaseous state.

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## 11. Toxicological information

- LD<sub>50</sub> oral, rat: 65 mg/kg
- LD<sub>50</sub> dermal, rabbit: Irritations.
- LD<sub>50</sub> inhalation, rat: 175 ppm(V) /6 h
- Further toxicological information: May be harmful if inhaled, swallowed, or if absorbed through the skin.

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## 12. Ecological information

- **Biologic degradation**  
Biodegradation: TOD: 1.66 g/g
- **Ecotoxic effects**  
Biological effects: Toxic for aquatic organisms.  
Fish toxicity: Salmo EC 10 : 500 mg/l; Salmo LC 50 : 24 mg/l /96 h; L.idus LC 50 : 29 mg/l;  
Plankton LC 50 : 200 mg/l /96 h;  
Bacterial toxicity: No information available  
Daphnia toxicity: EC 50 : 29 mg/l;  
Algal toxicity: No information available
- **Behavior in environmental compartments**  
Distribution: log P(oct): 0.83
- **Further ecological data**  
Do not allow to enter water, drain or soil.

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## 13. Disposal considerations

- **Product:**  
according to official local regulations.
- **Packing:**  
according to official local regulations.

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## 14. Transport information

- UN-no. / Name: UN1199 / Furaldehydes
- IMDG - Classification: 6.1(3) / UN1199 / PGII
- IATA - Classification: 6.1(3) / UN1199 / PGII
- ADR - Classification: 6.1(3) / UN1199 / PGII

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## 15. Regulatory information

- **Labeling according to EC Directives:**



Symbol:	T	Toxic
R-phrases:	21	Harmful in contact with skin.
	23/25	Toxic by inhalation and if swallowed.
	36/37	Irritating to eyes and respiratory system.
	40	Limited evidence of a Carcinogenic effect.
S-phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
EC-no.:		202-627-7

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## 16. Other information

- The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

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