



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

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

- Date of issue: May 3, 2006
- Product name: 1001 Isobutyraldehyde Natural
- Recommended use: Flavorings
- Manufacturer: Advanced Biotech, Paterson, NJ 07524
- Emergency telephone no.: 1-800-535-5053 (Infotrac)  
1-352-323-3500 International (call collect)

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

- Chemical identity: 2-Methyl propanal
- Molecular formula: C<sub>4</sub>H<sub>8</sub>O
- CAS No.: 78-84-2
- EC No.: 201-149-6
- EC-Index-No.: N/a

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### **3. Hazards identification**

Irritant. Highly flammable.

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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, water
- **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:**  
Highly Flammable. Vapors heavier than air. Forms 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: Colorless to pale yellow
- Odor: Pungent
- pH value at 10 g/l H<sub>2</sub>O: No information available
- Boiling point: 63.5°C
- Flash point: -19.4°C
- Melting point: -65°C
- Explosive properties: No information available
- Lower explosion limit: 1.6 Vol%
- Upper explosion limit: 10.6 Vol%
- Ignition temperature: 165°C



- Oxidizing properties: Not oxidizing; Flammable
- Vapor pressure: 180 hPa
- Density/specific gravity@20°C: 0.785-0.805
- Solubility in Water: 67 g/l
- Solubility in Organic solvents: Soluble

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## 10. Stability and reactivity

- Conditions to be avoided: Heating
- Substances to be avoided: Strong oxidizing agents, oxidizing agents, alkali hydroxides.
- Hazardous decomposition products: Acid
- Further information: No information available

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## 11. Toxicological information

- LD<sub>50</sub> oral, rat: 2810 mg/kg
- LD<sub>50</sub> dermal, rabbit: 7130 mg/kg
- LD<sub>50</sub> inhalation, rat: 23.9 mg/l /4 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: <95% /5d
- **Ecotoxic effects**  
Biological effects: No information available  
Fish toxicity: 23mh/1/96 h  
Bacterial toxicity: 468mg/1/17 h  
Daphnia toxicity: 277 mg/l /48 h  
Algal toxicity: 84mg/1/72h
- **Behavior in environmental compartments**  
Distribution: log P(oct): .77
- **Further ecological data**  
Do not allow to enter water, drain or soil.

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## 13. Disposal considerations

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



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## 14. Transport information

- UN-no. / Name: UN2045 / Isobutyraldehyde
- IMDG - Classification: 3 / UN2045 / PGII
- IATA - Classification: 3 / UN2045 / PGII
- ADR - Classification: 3 / UN2045 / PGII

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## 15. Regulatory information

- **Section 313 Supplier Notification:**  
This product contains the following EPCRA section 313 chemicals subject to the Reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372)

<u>CAS Number</u>	<u>Chemical Name</u>	<u>Percent by Weight</u>
78-84-2	Isobutyraldehyde	95.0%

- **Labeling according to EC Directives:**

Symbol:	Xi	Irritant
R-phrases:	F 36/38	Highly flammable Irritating to eyes and skin.
S-phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
EC-no.:		201-149-6

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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.

Issued by: Advanced Biotech  
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