



Safety Data Sheet: Fumonisin B1

1. Identification of the substance and the Manufacturer

1.1. Product identifiers

Product name	Fumonisin B1	CAS #	116355-83-0
Product Code	FB	EC Number #	621-436-3
Formula	C ₃₄ H ₅₉ NO ₁₅	RTECS	TZ8350000
Molecular weight	721.80	Substance?Mixture?	Substance
Synonyms	Fumonisin B1 Macrofusine		
Date of version	<23 October, 2022>		

1.2. Intended uses of the substance or mixture and uses advised against

Intended use:	Uses advised against:
Research and development. Laboratory reagent. Reference material. Manufacturing of substances.	Not for drug, Not to be used in humans or animals. Not food additive

Details of the supplier of the safety data sheet	
FERMENTEK ltd 4 Yatziv street, POB 47120 Jerusalem 97800, Israel	Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: fermentek@fermentek.com Website: www.fermentek.com

1.3. Emergency Telephone number

For chemical emergency spill, leak, fire, exposure, or accident calls CHEMTREC day or night: Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887
This company is the manufacturer of the product, and the supplier of the safety data sheet

1.4. Reach:

See section 15

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

Carcinogenicity	Category 2	H351	Suspected of causing cancer
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GHS Label elements, including precautionary statements

Pictogram:  Signal word: {Warning}

GHS Hazard Statements

H351	Suspected of causing cancer
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GHS Precautionary Statements

P201	Obtain special instructions before use.
P260	Do not breathe dust or mist.
P202	Do not handle until all safety precautions have been read and understood
P262	Do not get in eyes, on skin, or on clothing



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P280	Wear {protective gloves/protective clothing/eye protection/face protection}.
P261	Avoid breathing {dust/fume/gas/mist/vapors/spray}.
P264	Wash {hands} thoroughly after handling.

GHS Response Phrases:

P301+P301 + P330	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off all contaminated clothing. Rinse skin with water
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P304+340:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor/physician.
P308+313	If exposed or concerned: Get medical advice/attention

3. Composition/information on ingredients

Substance

Substance name:	Fumonisin B1
Concentration	100%
	CAS Registry #: 116355-83-0 EC#: 621-436-3 RTECS TZ8350000
	Molecular Formula: C ₃₄ H ₅₉ NO ₁₅ ; Molecular Weight: 721.80
Classification	Carcinogenicity, Category 2, H351
Mixture?	Substance

4. First Aid Measures

4.1. Description of First Aid Measures

General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel (ophthalmologist)
Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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Unsuitable extinguishing media	No information available
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5.2. Other information

Hazardous combustion products	Carbon oxides, Nitrous oxides.
Advice for firefighters	Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid raising and breathing dust, and provide adequate ventilation.
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6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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6.3. Methods and material for containment and cleaning up

Methods for containment:	Prevent further leakage or spillage if safe to do so. Contain spill and collect, as appropriate
Methods for cleaning up:	Cover liquid spill with sand, earth or other non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, and vermiculite). Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:	Work under hood. Do not inhale substance/mixture. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid prolonged or repeated exposure.
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7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions:	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.
	Store at -20 °C.
Incompatible materials:	None known based on information available.

8. Exposure Controls/Personal Protection

8.1. Control parameters

Control parameters	Components with workplace control parameters
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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Engineering Controls: Showers, Eyewash stations, Ventilation systems



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Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Use fumehood for routine work.

8.3. Personal protective equipment

The employer/end user, prior to use of this product should perform all recommendations below are advisory in nature and a risk assessment. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

[PPE=Personal Protection Equipment]

PPE: Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
PPE: Hand Protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal techniques to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices, and wash and dry hands
PPE: Eye Protection:	Use a face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)
PPE: Skin and Body Protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

9. Physical and chemical properties

9.1. Physical / chemical properties

Physical State at room temperature	Solid / powder
Color	
Melting/freezing point	
No further safety relevant data are available	

10. Stability and reactivity

Reactivity:	No information available.
Chemical stability:	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Sunlight.
Incompatible materials	Strong reducers and oxidizers
Possibility of Hazardous Reactions	None under normal processing
Hazardous decomposition products	Carbon oxides



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11. Toxicological information

11.1. Information on toxicological effects

The toxicological effects of this product have not been thoroughly studied.

11.1.1. Acute Toxicity

On Ingestion	TDLO, Oral, Rat, 175 mg/kg/13W-C
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitization/corrosion:	No data available
Unknown acute toxicity	No information available

11.1.2. Chronic toxicity, CRM hazards

	Prolonged or repeated exposure increases the risk. Possible risk of irreversible effects, 100 to 900 mg/kg
Mutagenicity:	Mutagenicity shown in-vitro in rat liver cells.
Carcinogenicity:	IARC: Group 2B Possibly Carcinogenic to Humans (<i>Fumonisin B1</i>)
Reproductive toxicity / Teratogenicity:	TDLO / Oral Mouse female 2 weeks after conception: Reproductive - Specific Developmental Abnormalities - musculoskeletal system Reproductive - Fertility - pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea) Reproductive - Fertility - post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)
STOT-SE – single exposure (GHS):	Liver, blood
Aspiration hazard:	No data available

11.2. Additional information

RTECS number	<i>TZ8350000</i>
Symptoms	Cough, Shortness of breath, Headache, Nausea, Vomiting Liver - changes in liver weight Blood - changes in serum composition (e.g., TP, bilirubin, cholesterol) Nutritional and Gross Metabolic - weight loss or decreased weight gain Kidney, Ureter, Bladder - changes in tubules (including acute renal failure, acute tubular necrosis)

12. Ecological Information

Eco-Toxicity	No further relevant information available
Other adverse effects	No further relevant information available.



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13. Disposal Considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations
Contaminated packaging	Dispose of as unused product

14. Transport information

14.1. UN number, Proper Shipping Name, Transport Hazard Class, packing group

	US DOT	US DOT	US DOT	US DOT
UN Number UN proper shipping name	Not dangerous for transport (Fumonisin B1)	Not dangerous for transport (Fumonisin B1)	Not dangerous for transport (Fumonisin B1)	Not dangerous for transport (Fumonisin B1)
Transport Hazard Class & Packing Group	Not regulated	Not regulated	Not regulated	Not regulated
Additional information	Not regulated	Not regulated	Not regulated	Not regulated

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation

USA EPA / TSCA	This product is not listed on the USA EPA TSCA (For research)
EU ECHA Status	This product is registered with the EU ECHA, Number 621-436-3 ANNEX III: Listed REACH Preregistration process.
CA: DSL/NDSL Status	This product is not listed on the Canadian DSL/NDSL

16. Other information

16.1. General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.
 The information given here is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.
 The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

16.2. The users'/employers' responsibility

All recommendations below are advisory in nature.
 A risk assessment should be performed by the employer/user prior to use of this product.
 All recommendations included in this document, are advisory in nature.
 The type of protective equipment must be selected based on the amount and concentration of all dangerous materials being used in the workplace.

16.3. Abbreviations and acronyms:

- 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



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- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, Median
- LD50: Lethal dose, Median
- 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
- Acute Tox.: Acute toxicity
- Skin Irrit: Skin corrosion/irritation
- Eye Dam.: Serious eye damage/eye irritation
- Repr.: Reproductive toxicity
- STOT RE: Specific target organ toxicity (repeated exposure)
- STOT SE: Specific target organ toxicity (Single exposure)
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16.5. End of SDS