

Safety Data Sheet: **Aflatoxin B1**

1. Identification of the substance and the Manufacturer

1.1. Product identifiers

Product name	Aflatoxin B1	Formula	$C_{17}H_{12}O_6$
Product Code	AF	RTECS	GY1925000
CAS #	1162-65-8	Molecular weight	312.27
EC Number #	214-603-3		
Date of version	<29 September, 2022>	Substance?Mixture?	Substance

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

1.3. 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

This company is the manufacturer of the product, and the supplier of the safety data sheet

1.4. 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

1.5. Reach:

See section 15

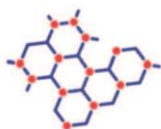
2. Hazards identification

2.1. Classification of the substance or mixture

GHS Classification:

Ingestion	Category 2	H300	Fatal if swallowed
Dermal contact	Category 2	H310	Fatal in contact with skin
Inhalation	Category 2	H330	Fatal if inhaled
Germ cell mutagenicity (Category 1B	H340	May cause genetic defects
Carcinogenicity	Category 1B	H350	May cause cancer

O:\SDS\SDS Word\SDS Aflatoxin B1 vers 9-2022.docx



2.2. GHS Label elements, including precautionary statements



Pictogram: Signal word: {DANGER}

GHS Hazard Statements

H300 + H310 + H330	Fatal if swallowed, in contact with skin or if inhaled.
H340	May cause genetic defects.
H350	May cause cancer

GHS Precautionary Statements

P201	Obtain special instructions before use.
P261	Avoid breathing {dust/fume/gas/mist/vapors/spray}.
P262	Do not get in eyes, on skin, or on clothing
P264	Wash {hands} thoroughly after handling.
P280	Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P308+313	If exposed or concerned: Get medical advice/attention
P301+P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P302 + P352 + P310	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/doctor
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor

3. Composition/information on ingredients

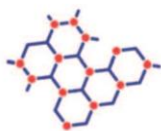
Substance	
Substance name:	Aflatoxin B1
Concentration	100%
	CAS Registry #: 1162-65-8 EC#: 214-603-3
	Molecular Formula: C₁₇H₁₂O ; Molecular Weight: 312.27
Classification	Acute Tox. 1; Muta. 1B; Carc. 1B; H300, H330, H310, H340, H350
Mixture?	Substance

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:	Flush eyes with water as a precaution. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact:	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Ingestion:	Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible. Consult a physician.

O:\SDS\SDS Word\SDS Aflatoxin B1 vers 9-2022.docx



Inhalation:	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
--------------------	-------------------------------------------------------------------------------------------------------------

4.2. Most important symptoms and effects, both acute and delayed

Skin Contact:	There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.
Eye contact:	There may be severe pain. The eyes may water profusely.
Ingestion:	There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may occur. There may be loss of consciousness.
Inhalation:	There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion. Convulsions may occur. There may be loss of consciousness.

4.3. Indication of any immediate medical attention and special treatment needed

	No data available
--	-------------------

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known

5.2. Other information

Hazardous combustion products	Carbon 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	Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
-----------------------------	------------------------------------------------------------------------------------------------

6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
----------------------------------	---------------------------------------------------------------------------------------------

6.3. Methods and material for containment and cleaning up

Methods for containment:	Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up:	Clean-up should be dealt with only by qualified personnel familiar with the specific substance. 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:	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.
--------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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. Reportedly, Light sensitive. Store at -20 °C.
Suitable packaging	Must only be kept in original packaging.
Incompatible materials:	None known based on information available.

8. Exposure Controls/Personal Protection

8.1. Control parameters

Control parameters	Components with workplace control parameters
--------------------	----------------------------------------------

8.2. Exposure controls

Appropriate engineering controls

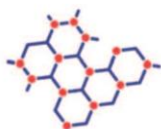
- Engineering Controls: Showers, Eyewash stations, Ventilation systems
- Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
- Use fumehood for routine work.

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	White
Melting/freezing point	269°C
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

11. Toxicological information

11.1. Information on toxicological effects

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

Acute Toxicity	Oral, rat; LD50= 6 mg/kg Oral, mouse; LD50= 9 mg/kg Oral, monkey LD50=2.2 mg/kg
Skin corrosion/irritation:	No quantitative data available
Serious eye damage/eye irritation:	No quantitative data available
Respiratory or skin sensitization/corrosion:	
Germ cell mutagenicity:	Probable human mutagen. Laboratory results have shown mutagenicity in several model systems (including human).
Carcinogenicity:	Known human carcinogen. IARC: Group 1: Carcinogenic to humans (Aflatoxin-B11)
Reproductive toxicity / Teratogenicity:	Probable human reproductive toxin/teratogen. Several laboratory studies have shown strong reproductive toxicity/teratogenicity in animal models. This effect may be extrapolated to have similar effects in humans.
STOT-SE – single exposure (GHS):	No data available
STOT-SE – repeated exposure (GHS):	Liver
Aspiration hazard:	No data available

11.2. Additional information

RTECS number	GY1925000
--------------	------------------

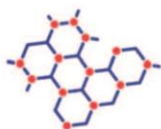
12. Ecological Information

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

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 IATA	US IMDG	US ADR/RID
UN Number UN proper shipping name	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Aflatoxin B1)	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Aflatoxin B1)	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Aflatoxin B1)	UN 3642 Toxins, Extracted from Living Sources, Solid, N.O.S. (Aflatoxin B1)
Transport Hazard Class & Packing Group	6.1, I	6.1, I	6.1, I	6.1, I
			Not marine pollutant	
Additional information	Excepted quantities (EQ)	Code: E5	Maximum net quantity per inner packaging: 1 g	Maximum net quantity per outer packaging: 300 g

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 214-603-3 ANNEX III: Listed REACH: Preregistred.
CA: DSL/NDSL Status	This product is not listed on the Canadian DSL/NDSL

16. Other information

16.1. Date of revision: Thursday, 29 September, 2022

16.2. 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.

End of SDS

O:\SDS\SDS Word\SDS Aflatoxin B1 vers 9-2022.docx