



Safety Data Sheet: *Triptolide*

1. Identification of the substance and the Manufacturer

1.1. Product identifiers

Product name	<u>Triptolide</u>
Product Code	TRP
CAS #	<u>38748-32-2</u>
EC Number #	<u>683-214-2</u>
Synonyms	<ul style="list-style-type: none"> • NSC 163062 • PG490
Formula	$C_{20}H_{24}O_6$
RTECS	<u>YK7751000</u>
Molecular weight	360.4
Substance? Mixture?	Substance

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

1.2.1. Intended use:	<ul style="list-style-type: none"> • <i>Research and development.</i> • <i>Laboratory reagent.</i> • <i>Reference material.</i> • <i>Analytical standard</i> • <i>Starting material for manufacturing of chemicals</i>
1.2.2. Uses advised against:	<ul style="list-style-type: none"> • <i>Not a drug,</i> • <i>Not a food additive</i> • <i>Not to be used in humans or animals.</i>

1.3. Contact

1.3.1. Details of the manufacturer and the supplier of the safety data sheet

FERMENTEK Ltd 4 Yatziv street, POB 4712 Jerusalem 97800, Israel	Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: fermentek@fermentek.com Website: www.fermentek.com
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1.3.2. 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



Safety Data Sheet: *Triptolide*

1.4. Reach:

See below chapter 15

1.5. Date of revision

10 2022

2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1. GHS Classification According to EU Reg. 1272/2008 and US OSHA 1910.1200)

Acute toxicity	Oral	Category 3	H301 Toxic if swallowed
Repro toxicity	Oral	Category ... 1B	

2.2. GHS Label elements, including precautionary statements

2.2.1. Signal word: Danger

Pictogram



2.2.2. Hazard statements

H300	Fatal if swallowed
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2.2.3. Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breath dust, fume, gas, mist, vapors and spray.
P270	Do not eat, drink, or smoke when using this product.
P308 + P310	IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.
P301+ P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

3. Composition/information on ingredients

Substance	
Substance name:	Triptolide
Concentration	100%
	CAS Registry #: 38748-32-2 EC#:683-214-2



Safety Data Sheet: *Triptolide*

	Molecular Formula: $C_{20}H_{24}O_6$ Molecular Weight: 360.4	
Classification	ORAL 3, REPR 1B	
Mixture?	Substance	

4. First Aid Measures

4.1. Description of First Aid Measures

General advice:	Show this safety data sheet to the doctor in attendance.
Eye contact:	After eye contact: rinse out with plenty of water. Remove contact lenses. ³
Skin Contact:	Take off immediately all contaminated clothing. Rinse skin with water/shower.
Ingestion:	Never give anything by mouth to an unconscious person. If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible
Inhalation:	Fresh air

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

Skin Contact:	No data available
Eye contact:	No data available
Ingestion:	No data available
Inhalation:	No data available

4.3. Any immediate medical attention and special treatment needed

	None known
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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, Nitrous oxides Sulfuric oxides
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Safety Data Sheet: *Triptolide*

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 dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.
Use personal protective equipment as required. Keep people away from and upwind of spill/leak.*

6.2. Environmental precautions

Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

*Provide appropriate exhaust ventilation at places where dust is formed
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.*

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

8.2. Exposure controls

Appropriate engineering controls

*General industrial hygiene practice
Showers, Eyewash stations, Ventilation systems
Avoid contact with skin, eyes and clothing.*



Safety Data Sheet: *Triptolide*

Wash hands before breaks and immediately after handling the product.
Use fumehood for routine work.

8.3. Personal protective equipment

[PPE=Personal Protection 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: Respiratory protection	Respiratory protection is not required. Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks. 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 must 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	Crystalline Powder
Color	Light yellow
Odor	Odorless

No further safety relevant data are available



Safety Data Sheet: *Triptolide*

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.

11.1.1. Acute Toxicity	<i>Oral LD50 Mouse, ... mg/kg</i> <i>Oral LD50 Rat, ... mg/kg</i> <i>Dermal LD50, Mouse mg/kg</i> <i>Dermal LD50, Rat mg/kg</i> <i>Inhalation LD50, Mouse mg/liter/hour</i> <i>Inhalation LD50, Rat mg/liter/hour</i>
Skin corrosion/irritation:	...No data available
Serious eye damage/eye irritation:	...No data available
Respiratory or skin sensitization/corrosion:	...No data available
11.1.2. CMR hazards	
Carcinogenicity	<i>Group 3: Not classified as human carcinogen</i> <i>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.</i>
Germ cell mutagenicity: <i>Mutagenicity observed in yeast - Saccharomyces cerevisiae at 4 mg/L</i>
Reproductive toxicity / Teratogenicity: <i>No data available</i>
11.1.3. Other	
STOT-SE – single exposure (GHS): <i>No data available</i>
STOT-SE – repeated exposure (GHS): <i>May damage kidneys, skeletal muscles in case of prolonged exposure</i>
Aspiration hazard: <i>No data available</i>

11.2. Additional information

RTECS number	YK7751000
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Safety Data Sheet: *Triptolide*

12. Ecological Information

Eco-Toxicity	No data available
Other adverse effects	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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	IATA	IMDG	ADR/RID
UN Number UN proper shipping name	3462 Toxins, extracted from living sources, solid, n.o.s. (Triptolide)	3462 Toxins, extracted from living sources, solid, n.o.s. (Triptolide)	3462 Toxins, extracted from living sources, solid, n.o.s. (Triptolide)	3462 Toxins, extracted from living sources, solid, n.o.s. (Triptolide)
Transport Hazard Class & Packing Group	Class 6.1 Packing group: ...	Class 6.1 Packing group: ...	Class 6.1 Packing group: ...	Class 6.1 Packing group: ...

14.2. Additional information

			Not marine polutant
Excepted quantities (EQ)	Not applicable		

15. Regulatory information

15.1. Safety, health, and environmental regulations/legislation

USA EPA / TSCA	This product is not listed on the USA EPA TSCA (it is for research)
EU ECHA Status	ANNEX III: List...ed REACH: Prereg...istered



Safety Data Sheet: *Triptolide*

REACH: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57)

CA: DSL/NDSL Status

This product is listed on the Canadian DSL/NDSL

15.2. Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. Other information

16.1. Date of revision:

- Tuesday, 18 October, 2022 14:10*

16.2. Department issuing this SDS

- Quality systems and regulatory affairs*

16.3. 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.*

16.4. The users'/employers' responsibility:

- 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.*

16.5. Abbreviations and acronyms:

Acute Tox.: Acute toxicity

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DOT: US Department of Transportation

EINECS: European Inventory of Existing Commercial Chemical Substances

Eye Dam.: Serious eye damage/eye irritation

HMIS: Hazardous Materials Identification System (USA)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

LC50: Lethal concentration, Median

LD50: Lethal dose, Median



Safety Data Sheet: *Triptolide*

NFPA: National Fire Protection Association (USA)

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

PBT: Persistent, Bioaccumulative and Toxic

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Repr.: Reproductive toxicity

Skin Irrit: Skin corrosion/irritation

STOT RE: Specific target organ toxicity (repeated exposure)

TLV: Threshold Limit Value

vPvB: very Persistent and very Bioaccumulative

16.6. APPENDIX: Acute toxicity hazard categories and (approximate) LD50/LC50 values defining the respective categories.

(Adapted from Safety Guides GHS05- -classification criteria for substances)

16.7. Copyright statement



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16.8. End of SDS