

Safety Data Sheet: **Lutein**

Section 1. Identification of the substance/mixture and of the Company

Product identifiers			
Product name	Lutein (Xantophyll)	Formula	C₄₀H₅₆O₂
Product Code	LU	RTECS	N.A.
CAS #	144-68-3	Molecular weight	568.9
EC Number #	204-840-0	Mixture? Substance?	Substance
Intended uses of the substance or mixture and uses advised against			
Intended use		Uses advised against:	
Only for Research and/or Development		Not for drug, Not to be used in humans or animals. Not food additive	
Details of the supplier of the safety data sheet		Emergency Telephone number	
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	
		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			
Reach: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.			

Section 2. Hazards identification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Classification of the substance or mixture
GHS Classification:

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

GHS Label elements, including precautionary statements

 Pictogram: **{None}** Signal word: **{Not classified}**
Precautionary Statements

P264	Wash hands thoroughly after handling
P308+P313	IF exposed or concerned, get medical advice/attention

Section 3. Composition/information on ingredients

Substance	
Substance name:	Lutein
	CAS Registry #: 144-68-3 EC#: 204-840-0
	Molecular Formula: C₄₀H₅₆O₂
	Concentration: ≤ 100%
Mixture?	Substance

Section 4. *First Aid Measures*

Description of First Aid Measures

General advice:	If deemed necessary, consult a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye contact:	Flush with plenty of water.
Skin Contact:	Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion:	Wash out mouth with water

Most important symptoms and effects

Skin contact Eye contact: Ingestion	There may be mild irritation at the site of contact
Self-protection of the first aider:	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
Note to physicians	Treat symptomatically

Section 5. *Fire-fighting measures*

Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None
Hazardous combustion products	Carbon oxides, Nitrogen oxides.
Advice for firefighters	Wear self-contained breathing apparatus for fire fighting if necessary. Wear protective suit.

Section 6. *Accidental release measures*

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

Environmental precautions

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

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: 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.

Section 7. *Handling and storage*

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.

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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, Protect from sunlight. Protect from moisture

Incompatible materials: None known based on information available.

Section 8. Exposure Controls/Personal Protection

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the local regulatory bodies

OSHA Permissible Exposure Limits No Data Available
NIOSH Recommended Exposure Limits No Data Available
ACGIH Threshold Limit Values No Data Available

Exposure controls

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the local regulatory bodies.

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.

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.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

[PPE=Personal Protection Equipment]

PPE Eye/face protection Wear safety glasses with side shields (or goggles).
PPE Skin and Body Protection Wear protective gloves and protective clothing.
PPE Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Section 9. Physical and chemical properties

Physical / chemical properties

Physical State at room temperature	Solid / powder
Color	red
Melting/freezing point	205°C
No further safety relevant data are available	

Section 10. Stability and reactivity

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

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Section 11. Toxicological information

Information on toxicological effects

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

Acute Toxicity	
Ingestion	N.A.
Inhalation	No data available
Serious eye damage/eye irritation:	No data available
Skin corrosion/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available
Reproductive toxicity / Teratogenicity:	No data available
Aspiration hazard:	No data available
Additional information:	RTECS: N.A

Section 12. Ecological Information

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

Section 13. Disposal Considerations

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

Section 14. Transport information

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

	US DOT	ADR/RID:	IMDG:	IATA
UN Number	<i>Not regulated</i>	<i>Not regulated</i>	<i>Not regulated</i>	<i>Not regulated</i>
UN proper shipping name	<i>Not dangerous goods</i>	<i>Not dangerous goods</i>	<i>Not dangerous goods</i>	<i>Not dangerous goods</i>
Transport Hazard Class & Packing Group	<i>Not regulated</i> <i>Not dangerous goods</i>	<i>Not regulated</i> <i>Not dangerous goods</i>	<i>Not regulated</i> <i>Not dangerous goods</i>	<i>Not regulated</i> <i>Not dangerous goods</i>

Section 15. Regulatory information

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 under # 204-840-0 C&L : Listed Annex III : listed. Reach: Preregistered
CA: DSL/NDSL Status	This product is not listed on the Canadian DSL/NDSL

Section 16. Other information

Date of revision: 2 August, 2020

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-----