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Safety Data Sheet: (s)-AR-Turmerone

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

| Product identifiers | | | |
|---------------------|------------------|-------------|-----------|
| Product name | (s)-AR-Turmerone | EC Number # | 664-010-2 |
| Product Code | ART | Formula | C15H20O |
| CAS# | 532-65-0 | Mol Weight | 216.30 |
| RTECS | N.A. | | |

Intended uses of the substance or mixture and uses advised against

Intended use Uses advised against:

Only for Research and/or Development Not to be used in humans or animals. Not food additive

Details of the supplier of the safety data sheet

FERMENTEK Itd 4 Yatziv street, POB 47120 Jerusalem 97800, Israel

Tel: +972 2 5853953 Fax: +972 2 5853943 eMail: fermentek@fermentek.com Website: www.fermentek.com

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

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

Classification of the substance or mixture

CHS Classification

| diib diabbilicationi | | | |
|-----------------------------------|---------------|------|---|
| Serious eye damage/eye irritation | (Category 2A) | H319 | Causes serious eye irritation |
| Skin sensitization | (Category 1) | H317 | May cause an allergic skin reaction |
| Chronic aquatic toxicity | (Category 2) | H411 | Toxic to aquatic life with long lasting effects |

GHS Label elements,

Signal word: {warning} Pictogram:



including precautionary statements

| | ▼ · |
|-------------------------------------|---|
| GHS Hazard Statements | H411 - Toxic to aquatic life with long lasting effects |
| | H319 - Causes serious eye irritation |
| | H317 - May cause an allergic skin reaction |
| GHS Precautionary Statements | P280 - Wear eye protection/ face protection |
| | P321 - Specific treatment (see Emergency Phone Number on this |
| | SDS) |

Composition/information on ingredients Section 3.

(s)-AR-Turmerone Substance

CAS Registry #:532-65-0; EC#:664-010-2; Molecular Formula: C15H200; Molecular Weight: 216.30

Mixture: Not mixture.

Section 4. First Aid Measures

Description of First Aid Measures





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General advice: If medical attention is required, show this safety data sheet to the doctor.

Eye contact: Immediately flush with plenty of water. 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 skin with soap and water.

Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately. Never

give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth

with water and drink afterwards plenty of water. Call a physician

Inhalation: Remove to fresh air If breathing is difficult, give oxygen If not breathing, give artificial

respiration

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 |
| 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: Handle in accordance with good industrial hygiene and safety practice

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.

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.

Section 8. Exposure Controls/Personal Protection

No occupational exposure limits are listed for this material.

OSHA Permissible Exposure Limits

No Data Available

NIOSH Recommended Exposure Limits

ACGIH Threshold Limit Values

No Data Available



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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.

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 full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. 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. 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. Wear protective clothing. Choose body protection

according to the amount and concentration of the dangerous substance at the work place. When deemed needed according to the concentration and

amount of this product, use a complete body suit

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

Section 9. Physical and chemical properties

Physical / chemical properties

| Physical State at room temperature | Oil |
|------------------------------------|------------------------|
| Color | Yellowish |
| No further safety releva | ant data are available |

Section 10. Stability and reactivity

Reactivity:

Chemical stability:

Conditions to avoid
Incompatible materials

Possibility of Hazardous Reactions

Hazardous decomposition products:

No information available.

Stable under normal conditions.

Heat, flames and sparks. Sunlight.

Strong reducers and exidizers

None under normal processing

Carbon oxides, Nitrogen oxides

Section 11. Toxicological information

Information on toxicological effects

Acute Toxicity

| Acute Toxicity | | |
|------------------------------------|--|--|
| Serious eye damage/eye irritation: | H319 - Causes serious eye irritation | |
| Potential Health Effects | | |
| Inhalation: | No information available. | |
| Skin | H317 - May cause an allergic skin reaction | |
| Eves: | May cause eve irritation | |



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Section 12. Ecological Information

Eco-ToxicityMay cause long lasting harmful effects to aquatic life **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 Do not reuse |

Section 14. Transport information

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

| | US DOT | ADR/RID: | IMDG: | IATA |
|---|--|--|--|--|
| UN Number UN proper shipping name | UN3082 Environmentally hazardous substance, liquid, n.o.s. ((s)-AR-Turmerone | UN3082 Environmentally hazardous substance, liquid, n.o.s. ((s)-AR-Turmerone | UN3082 Environmentally hazardous substance, liquid, n.o.s. ((s)-AR-Turmerone | UN3082 Environmentally hazardous substance, liquid, n.o.s. ((s)-AR-Turmerone |
| Transport Hazard Class & Packing Group | 9 Pg III | 9 Pg III | 9 Pg III | 9 Pg III |
| Environmental Hazard | | Yes | | Yes |
| Special Provisions | Classification code M6 Tunnel restriction code (E) | | 274, 335 EmS-No F-A, S-F | A97, A158, A197 |

Section 15. Regulatory information

| Safety, health and environmental regulations/legislation | | |
|--|---|--|
| USA EPA / TSCA | This product is not listed on the USA EPA TSCA | |
| EU ECHA Status | This product is not registered with the EU ECHA | |
| CA: DSL/NDSL Status | This product is not listed on the Canadian DSL/NDSL | |
| Chemical Safety Report | No information available | |

Section 16. Other information

Date of revision:28 May 2017

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 c/ombination with any other materials or in any process, unless specified in the text.



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