

## SAFETY DATA SHEET

### 1. IDENTIFICATION

Product name: rac-alpha-Tocopherol1

CAS No. : 2074-53-5

Brand: Macklin

Company: Shanghai Macklin Biochemical Co.,Ltd.

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### 2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

no data available

HEALTH HAZARDS

no data available

ENVIRONMENTAL HAZARDS

no data available

GHS label elements, including precautionary statements

Pictograms or hazard symbols

Signal word

no data available

Hazard statements

no data available

Precautionary statements

Prevention

no data available

Response

no data available

Storage

no data available

Disposal

no data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components:rac-alpha-Tocopherol1

CAS No.:2074-53-5

Chemical Formula:C<sub>29</sub>H<sub>50</sub>O<sub>2</sub>

### 4. FIRST AID MEASURES

4.1

Description of necessary first-aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2

Most important symptoms/effects, acute and delayed

no data available

4.3

Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

## 5. FIRE-FIGHTING MEASURES

5.1

Suitable extinguishing media

Wear self contained breathing apparatus for fire fighting if necessary.

5.2

Specific hazards arising from the chemical

no data available

5.3

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

6.1

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2

Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3

Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES Personal precautions, protective equipment and emergency procedures: Avoid breathing vapors, mist or gas. Environmental precautions: Do not let product enter drains. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

#### Conditions for safe storage, including any incompatibilities

Store the container at 2-8 °C. Store separately from food containers or incompatible materials.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values

no data available

Biological limit values

no data available

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

Set up emergency exits and the risk-elimination area.

Personal protective equipment

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flamm resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

no data available

Odour

Little or no odor

Melting point/freezing point

3°C

Boiling point or initial boiling point and boiling range

485.9±0.0°C at 760 mmHg

Flammability

no data available

Lower and upper explosion limit/flammability limit

no data available

Flash point

210.2°C

Auto-ignition temperature

no data available

Decomposition temperature

no data available

pH

no data available

Kinematic viscosity

no data available

Solubility

Insoluble in water, but water-dispersible.

Partition coefficient n-octanol/water

no data available

Vapour pressure

4.59E-10mmHg at 25°C

Density and/or relative density

0.93 g/cm<sup>3</sup>  
Relative vapour density  
no data available  
Particle characteristics  
no data available

## 10. STABILITY AND REACTIVITY

10.1  
Reactivity  
no data available  
10.2  
Chemical stability  
Unstable to UV light, alkalies, and oxidation. Tocopherol  
10.3  
Possibility of hazardous reactions  
no data available  
10.4  
Conditions to avoid  
no data available  
10.5  
Incompatible materials  
Strong oxidizing agents  
10.6  
Hazardous decomposition products  
Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity  
Oral: no data available  
Inhalation: no data available  
Dermal: no data available  
  
Skin corrosion/irritation  
no data available  
  
Serious eye damage/irritation  
no data available  
  
Respiratory or skin sensitization  
no data available  
  
Germ cell mutagenicity  
no data available  
  
Carcinogenicity  
no data available  
  
Reproductive toxicity  
no data available  
  
STOT-single exposure  
no data available  
STOT-repeated exposure  
no data available  
  
Aspiration hazard  
no data available

## 12. ECOLOGICAL INFORMATION

#### 12.1

##### Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

#### 12.2

##### Persistence and degradability

PURE CULTURE: Vitamin E was biodegraded by aerobic bacterial communities (genera *Idiomarina* and *Bacillus*), isolated from marine sediment and microbial mat sample(1); biodegradation appeared to involve an initial omega-oxidation of the isoprenoid side chain and subsequent beta-oxidation, affording 2,5,7,8-tetramethyl-2(2'-carboxyethyl)-6-hydroxychroman(1).

#### 12.3

##### Bioaccumulative potential

An estimated BCF of 39 was calculated in fish for vitamin E(SRC), using an estimated log Kow of 12.2(1) and a regression-derived equation(1). According to a classification scheme(2), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate(SRC), provided the compound is not metabolized by the organism(SRC).

#### 12.4

##### Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of vitamin E can be estimated to be  $2.5 \times 10^7$ (SRC). According to a classification scheme(2), this estimated Koc value suggests that vitamin E is expected to be immobile in soil.

#### 12.5

##### Other adverse effects

no data available

### 13. DISPOSAL CONSIDERATIONS

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

### 14. TRANSPORT INFORMATION

#### 14.1

##### UN Number

ADR/RID: no data available

IMDG: no data available

IATA: no data available

#### 14.2

##### UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

#### 14.3

##### Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

#### 14.4

##### Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.5

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6

Special precautions for user

no data available

14.7

Transport in bulk according to IMO instruments

no data available

## 15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

EC number

218-197-9

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Not Listed.

China Catalog of Hazardous chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Not Listed.

## 16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.