Material Safety Data Sheet

Retinoic Acid msds

Section 1: Identification of the Substance/Preparation and of the Company/Undertaking

Identification of the substance or preparation

Product Name: Retinoic Acid
INCI Name: Retinoic Acid
Synonym: Tretinoin
Product Number: C02010S
CAS#: 302-79-4
Origin: Biotechnological

Use of the substance/preparation: Skin whitening/lightening agent

Company/undertaking identification

M.C.Biotec Inc.
No.40 Ma Jia Street, Nanjing 210009, China
Tel: 0086-25-86620042  Fax: 0086-86624072
Email: mc@mcbiotec.com  Website: www.mcbiotec.com

Section 2: Hazards Identification

Emergency Overview

OSHA Hazards
Harmful by ingestion.

GHS Classification
Acute toxicity, Oral (Category 4)
Acute toxicity, Dermal (Category 5)
Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram

Signal word  Warning
Hazard statement(s)

H302  Harmful if swallowed.
H313  May be harmful in contact with skin.
H401  Toxic to aquatic life.
Precautionary statement(s)

HMIS Classification

Health hazard:  1
Flammability:  0
Physical hazards:  0

NFPA Rating

Health hazard:  0
Fire:  0
Reactivity Hazard:  0

Potential Health Effects

Inhalation  May be harmful if inhaled. May cause respiratory tract irritation.
Skin  May be harmful if absorbed through skin. May cause skin irritation.
Eyes  May cause eye irritation.
Ingestion  May be harmful if swallowed.

Section 3: Composition and Information on Ingredients

Synonyms:  Vitamin A acid
           all-trans-Retinoic acid
           Tretinoin

Formula:  C20H28O2
Molecular Weight:  300.44 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>302-79-4</td>
<td>206-129-0</td>
<td>-</td>
<td>100%</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.
In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

Section 5: Fire Fighting Measures

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Oxides of phosphorus, Magnesium oxide

Section 6: Accidental Release Measures

Personal precautions
Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20 °C. Light sensitive. Keep in a dry place.

Section 8: Exposure Controls/Personal Protection

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand 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.

**Eye protection**
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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### Section 9: Physical and Chemical Properties

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellow or light orange</td>
</tr>
</tbody>
</table>

**Safety data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting point /freezing point</td>
<td>Almost 182°C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/A</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition</td>
<td>N/A</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Vapour pressure  N/A
Specific Gravity  1.76/cm³
Solubility in Water (%)  insoluble
Partition coefficient:  log Pow: 6.7
n-octanol/water
Relative vapour density  N/A
Odour  N/A
Odour Threshold  N/A
Evaporation rate  N/A
N/A = not available

Section 10: Stability and Reactivity

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
Light

Materials to avoid
Oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Oxides of phosphorus, Magnesium oxide
Other decomposition products - no data available

Hazardous Polymerization
Will not occur under normal conditions and storage.

Section 11: Toxicological Information

Acute toxicity

Oral LD50
LD50 (oral, rat) – 2,000 mg/kg
<table>
<thead>
<tr>
<th><strong>Dermal LD50</strong></th>
<th>LD50 (dermal, rabbit) &gt;2500 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation LC50</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Other information on acute toxicity</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Serious eye damage/eye irritation</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitization</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td>no data available</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>May be harmful if inhaled. May cause respiratory tract irritation.</td>
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</tbody>
</table>
**Ingestion**  
May be harmful if swallowed.

**Skin**  
May be harmful if absorbed through skin. May cause skin irritation.

**Eyes**  
May cause eye irritation.

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**
no data available

**Additional Information**
RTECS: Not available

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### Section 12: Ecological Information

**Toxicity**
- Toxicity to fish  
LC50 - *Danio rerio* (zebra fish) - 4.64 mg/l - 96 h

**Persistence and degradability**
- Biodegradability  
Result: > 60 % - Readily biodegradable

**Bioaccumulative potential**
Does not bioaccumulate

**Mobility in soil**
no data available

**PBT and vPvB assessment**
no data available

**Other adverse effects**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life.

no data available

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### Section 13: Disposal Considerations

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**
Dispose of as unused product.

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### Section 14: Transport Information

**DOT (US)**
**IMDG**
**IATA**
Section 15: Regulatory Information

OSHA Hazards
Harmful by ingestion.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information

Further information
The information above is based on our present knowledge. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

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