

SAFETY DATA SHEET

according to Regulation (EC) No.1907/2006

Version 2.0 Revision Date 12.30.2010

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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.

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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) | none | | |
| 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 | : C ₂₀ H ₂₈ O ₂ | | |
| Molecular Weight | : 300.44 g/mol | | |
| CAS-No. | EC-No. | Index-No. | Concentration |
| Tretinoin | | | |
| 302-79-4 | 206-129-0 | - | 100% |
| 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.

Section 9: Physical and Chemical Properties

Appearance

| | |
|--------|------------------------|
| Form | powder |
| Colour | Yellow or light orange |

Safety data

| | |
|----------------------------------|--------------|
| pH | N/A |
| Melting point /freezing point | Almost 182°C |
| Boiling point | N/A |
| Flash point | N/A |
| Ignition temperature | N/A |
| Autoignition | N/A |
| Temperature | |
| Lower explosion limit | N/A |
| Upper explosion limit | N/A |

| | |
|-------------------------------------------|----------------------|
| Vapour pressure | N/A |
| Specific Gravity | 1.76/cm ³ |
| Solubility in Water (%) | insoluble |
| Partition coefficient: n-octanol/water | log Pow: 6.7 |
| 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

Dermal LD50

LD50 (dermal, rabbit) >2500 mg/kg

Inhalation LC50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation**Serious eye damage/eye irritation**

Eyes - rabbit - No eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

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

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

Section 13: Disposal Considerations

Product

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

Contaminated packaging

Dispose of as unused product.

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

| | CAS-No. | Revision Date |
|-----------|----------|---------------|
| Tretinoin | 302-79-4 | |

New Jersey Right To Know Components

| | CAS-No. | Revision Date |
|-----------|----------|---------------|
| Tretinoin | 302-79-4 | |

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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